SHOUT
SHARE
IT

06(42)

FOR THE PEOPLE
FOR EDVCATION
FOR SCIENCE

LIBRARY
OF
THE AMERICAN MUSEUM
OF
NATURAL HISTORY

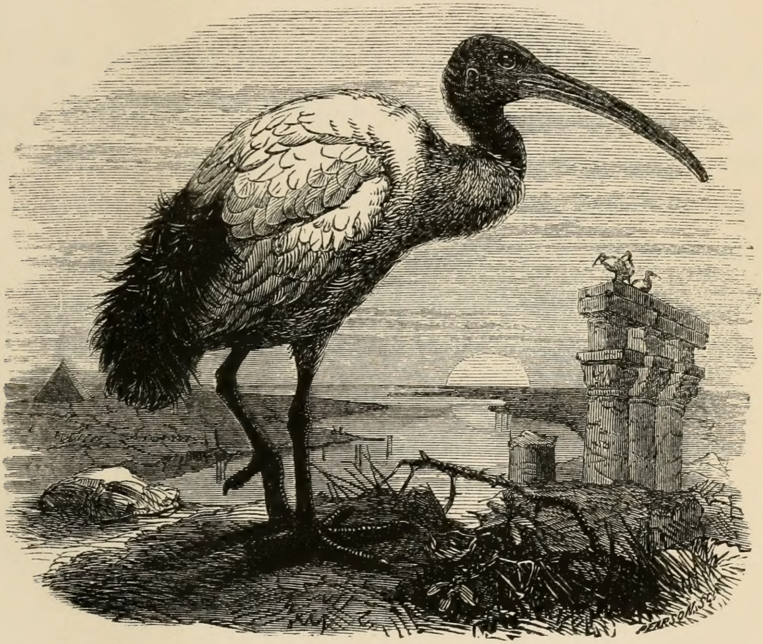
AMERICAN MUSEUM OF NATURAL HISTORY CENTRAL PARK NEW YORK

THE IBIS,

A

QUARTERLY JOURNAL OF ORNITHOLOGY.

EDITED BY
OSBERT SALVIN, M.A., F.R.S.,
STRICKLAND CURATOR IN THE UNIVERSITY OF CAMBRIDGE, &c.



VOL. V. 1875.

THIRD SERIES.

Ibidis auspicio novus incipit Ibidis ordo!

LONDON:
JOHN VAN VOORST, 1 PATERNOSTER ROW.
1875.

ALERE FLAMMAM.

PRINTED BY TAYLOR AND FRANCIS,
RED LION COURT, FLEET STREET.

PREFACE.

In bringing the 17th volume of 'The Ibis' to a conclusion, it remains for me to thank the many contributors to its pages for the support they have given me. That the former have not diminished in number, nor their contributions fallen off in excellence or variety, may well be subjects of congratulation to the Members of our Union. That our prospects for the coming year seem no less bright is equally a source of satisfaction.

OSBERT SALVIN,
Editor.

Brooklands Avenue, Cambridge.
October 1875.

BRITISH ORNITHOLOGISTS' UNION.

1875.

[An asterisk indicates an Original Member.]

Date of Election.

1874. Edward R. Alston, F.Z.S.; Dorset Street, London, W.

1870. Andrew Anderson, F.Z.S.; Futtehgurh, North-West Provinces, India.

1872. Hanbury Barclay, F.Z.S.; Middleton Hall, Tamworth.

1875. John Biddulph, Capt. 19th Hussars; Government House, Calcutta.

1873. W. T. Blanford, F.R.S. &c.; Geological Survey of India, Calcutta.

1870. Sir Victor Brooke, Bart.; Colebrooke, Fermanagh, Ireland.

1871. Arthur Basil Brooke; Cardney, Dunkeld, N.B.

1866. Henry Buckley, F.Z.S.; Edgbaston, Birmingham.

1868. Thomas Edward Buckley, B.A., F.Z.S.; Ardullie Lodge, Foulis, N. B.

1872. Walter Lawry Buller, Sc.D., C.M.G., F.L.S., &c.; Wanganui, New Zealand.

1874. John Cordeaux; Great Cotes, Ulceby, Lincolnshire.

1866. Arthur William Crichton, B.A., F.L.S., F.Z.S.; Broadward Hall, Salop.

1874. Charles Danford, F.Z.S.; Knowles, Newton, Devon.

1865. Henry Eeles Dresser, F.Z.S.; 6 Tenterden Street, Hanover Square, London, W.

*Henry Maurice Drummond-Hay, C.M.Z.S., Lieutenant-Colonel, Royal Perth Rifles; Seggieden, Perth.

1870. Daniel Giraud Elliot, F.L.S., F.Z.S., &c.; 5 Rue de Tilsitt, Paris.

1866. Henry John Elwes, F.Z.S.; Miserden House, Cirencester.

Date of Election.

*Thomas Campbell Eyton, F.Z.S.; Eyton Hall, Wellington, Salop.

1873. H. W. Feilden, Captain and Paymaster, Royal Artillery.

1867. George Gooch Fowler, B.A.; Gunton Hall, Lowestoft, Suffolk.

1865. Rev. Henry Elliott Fox, B.A.; 30 Warwick Square, London, S.W.

1873. Alfred Henry Garrod, M.A., F.Z.S.; 11 Harley Street, London.

*Frederick DuCane Godman, F.L.S., F.Z.S.; 6 Tenterden Street, Hanover Square, W.

*Percy Sanden Godman, B.A., C.M.Z.S.; Nuthurst Lodge, Horsham, Sussex.

1874. Major H. Godwin-Austen, F.Z.S.; Chilworth Manor, Guildford, Surrey.

1871. Robert Gray; 13 Inverleith Row, Edinburgh.

*John Henry Gurney, F.Z.S.; Northrepps, Norwich.

1870. John Henry Gurney, Jun., F.Z.S.; Northrepps, Norwich.

1873. James Fetherstonhaugh Hamilton, F.Z.S.; 27 Elgin Crescent, Notting Hill, W.

1868. James Edmund Harting, F.L.S., F.Z.S.; 24 Lincoln's Inn Fields, London.

1873. John A. Harvie Brown; Dunipace House, Falkirk, N.B.

1868. Rev. Herbert S. Hawkins, M.A.; Beyton Rectory, Suffolk.

1875. J. C. Hele; Knowles, Newton-Abbot.

1873. Charles B. Hodgson, F.Z.S.; 13 Waterloo Street, Birmingham.

*Wilfrid Hudleston Hudleston, M.A., F.Z.S.; 23 Cheyne Walk, Chelsea.

1874. Baron A. von Hügel; Moorlands, Bournemouth.

1869. Allan Octavian Hume, C.B.; Secretary to the Government of India, Calcutta.

1873. Most Hon. Charles, Marquess of Huntly; 41 Upper Grosvenor Street, London.

1870. Hon. Hedworth Hylton-Jolliffe; Charlton, Radstock, Bath.

1870. Col. Leonard Howard L. Irby, F.Z.S.; Hythe, Southampton.

1874. Alexander W. M. Clarke Kennedy, F.Z.S.; Carruchan, Dumfries, N.B.

*Arthur Edward Knox, M.A., F.L.S., F.Z.S.; Trotton House, Petersfield, Sussex.

Date of Election.

*Right Hon. Thomas Lyttleton, Lord Lilford, F.L.S., F.Z.S., &c.; Lilford Hall, Oundle, Northants.

1874. Major John Hayes Lloyd, F.Z.S.; 74 Adelaide Road, Haverstock Hill, London, N.W.

1875. John Wingfield Malcolm, M.P.; 7 Stanhope Street, Mayfair, London, W.

1870. C. H. T. Marshall, F.Z.S.; Captain, Bengal Staff Corps.

1870. G. F. L. Marshall, F.Z.S.; Capt. Royal (Bengal) Engineers.

1864. Alexander Goodman More, F.L.S. &c.; 3 Botanic View, Glasnevin, Dublin.

1874. Rhodes W. Morgan; Madras Forest Department, Ootacamund, India.

1872. Francis D'Arcy William Clough Newcome; Feltwell Hall, Brandon, Suffolk.

*Alfred Newton, M.A., F.R.S., V.P.Z.S.; Professor of Zoology in the University of Cambridge.

*Edward Newton, M.A., C.M.G., F.L.S., C.M.Z.S., Colonial Secretary, Mauritius.

1875. George Pole, Capt. Royal Engineers; Junior United Service Club.

1871. Reginald Carew Pole, Lieut. Royal Navy; Yovilton, Ilchester.

*John William Powlett-Orde, F.Z.S., late Captain, 42nd (Royal Highland) Regiment; Auchnaba House, Loch Gilp Head, N. B.

1872. R. G. Wardlaw Ramsay, 67th Regiment; White Hill, Lasswade, N. B.

1865. George Dawson Rowley, M.A., F.Z.S.; Chichester House, Brighton.

1873. Oliver Beauchamp Coventry St. John, Major R.A., F.Z.S.

*Osbert Salvin, M.A., F.R.S., &c.; 6 Tenterden Street, Hanover Square, London, W.

1870. Howard Saunders, F.Z.S.; 7 Radnor Place, Hyde Park.

*Philip Lutley Sclater, M.A., Ph.D., F.R.S., &c.; 44 Elvaston Place, Queen's Gate, London, W.

1873. Henry Seebohm; Oak Lea, Collegiate Crescent, Broomhall Park, Sheffield.

1871. Richard Bowdler Sharpe, F.L.S., F.Z.S.; Senior Assistant, Zoological Department, British Museum.

1870. G. Ernest Shelley, F.Z.S., late Captain, Grenadier Guards; 6 Tenterden Street, Hanover Square, London, W.

Date of Election.

1865. Rev. Charles William Shepherd, M.A., F.Z.S.; Trotterscliffe, Kent.

1864. Rev. Alfred Charles Smith, M.A.; Yatesbury Rectory, Wiltshire.

1874. Cecil Smith; Lydiard House, Taunton, Somersetshire.

1875. A. C. Stark. Hillstead, Torquay, Devon.

1864. Henry Stevenson, F.L.S,; Unthank's Road, Norwick.

1868. Hamon Styleman Le Strange, F.Z.S.; Hunstanton Hall, Norfolk.

1875. Paget Walter Le Strange, Lieut.-Col. Royal Artillery, Sheerness.

*Edward Cavendish Taylor, M.A., F.Z.S.; 74 Jermyn Street, London.

1864. George Cavendish Taylor, F.Z.S.; 42 Elvaston Place, Queen's Gate, London.

1873. William Bernhard Tegetmeier, F.Z.S.; Finchley, Middlesex.

*Rev. Henry Baker Tristram, M.A., LL.D., F.R.S., &c., Canon of Durham. The College, Durham.

1864. Henry Morris Upcher, F.Z.S.; Sherringham Hall, Norfolk.

1872. Herbert Taylor Ussher, C.M.G., Lieut.-Governor of the Island of Tobago, West Indies.

1864. Right Hon. Arthur Viscount Walden, F.R.S., F.L.S., Pres. Z.S.; Walden Cottage, Chislehurst, Kent.

1874. Charles Bygrave Wharton, F.Z.S. Ringsley, Cheadle, Stoke-upon-Trent.

1871. E. Percival Wright, M.D., F.L.S., F.Z.S., Professor of Botany in the University of Dublin.

1875. Charles A. Wright.

Extra-Ordinary Member.

1860. Alfred Russel Wallace, F.Z.S.; The Dell, Grays, Essex.

Honorary Members.

1860. Professor Spencer F. Baird, Assistant Secretary to the Smithsonian Institution, *Washington.*

1860. Doctor Eduard Baldamus, Moritzwinger, No. 7, *Halle.*

1860. Doctor Jean Cabanis, Erster Custos am königlichen Museum der Friedrich-Wilhelm's Universität zu *Berlin.*

1870. Doctor Otto Finsch, Zoological Museum, *Bremen.*

1860. Doctor Gustav Hartlaub, *Bremen.*

Date of Election.

1860. Edgar Leopold Layard, C.M.G., F.Z.S., H.M. Consul in the *Fiji Islands.*

1869. August von Pelzeln, Custos am k.-k. zoologischen Cabinete in *Wien.*

1860. Professor J. Reinhardt, Kongelige Naturhistoriske Museum i *Kjöbenhavn.*

1862. Robert Swinhoe, F.Z.S., F.R.G.S., late of H. M. Consular Service, China. 33 Carlyle Square, London, S.W.

Foreign Members.

1872. Prof. J. V. Barboza du Bocage, Royal Museum, *Lisbon.*

1875. Hans Graf von Berlepsch, Witzenhausen, Hessen-Nassau.

1872. Prof. J. F. Brandt, Imperial Museum, *St. Petersburg.*

1873. Robert Collett, *Christiania.*

1872. Doctor Elliott Coues, U.S. Army, Smithsonian Institution, *Washington, D. C.*

1875. Marchese Giacomo Doria, *Genoa.*

1872. Doctor Victor Fatio, *Geneva.*

1872. Doctor Henry Hillyer Giglioli, Royal Superior Institute, *Florence.*

1872. Doctor Theodor von Heuglin, *Stuttgart.*

1872. George N. Lawrence, *New York.*

1872. Baron De Selys Longchamps, *Liège.*

1872. Doctor A. J. Malmgren, *Helsingfors.*

1872. Doctor A. von Middendorff, *Dorpat.*

1872. Alphonse Milne-Edwards, Jardin des Plantes, *Paris.*

1872. Prof. Gustav Radde, *Tiflis.*

1872. Count Tommaso Salvadori, Royal Museum, *Turin.*

1872. Prof. Herman Schlegel, University Museum, *Leyden.*

CONTENTS of VOL. V.—THIRD SERIES.

(1875.)

Number XVII., *January*.

Page

I. Cruise of the 'Zara,' R. Y. S., in the Mediterranean. By Lord Lilford 1

II. Contributions to a History of the Accipitres. The Genus *Glaucidium*. By R. Bowdler Sharpe, F.L.S., F.Z.S., &c., of the Zoological Department, British Museum. (Plates I., II.) 35

III. Three Months on the Coast of South Africa. By Captain G. E. Shelley, F.R.G.S. 59

IV. Notes on a Catalogue of the Accipitres in the British Museum, by R. Bowdler Sharpe (1874). By J. H. Gurney . 87

V. Notes on Severtzoff's 'Fauna of Turkestan' (Turkestanskie Jevotnie). By H. E. Dresser 96

VI. On Two apparently new Species of Penguin from New Zealand. By Dr. O. Finsch, Hon.M.B.O.U. 112

VII. Ornithological Notes made at Chefoo (Province of Shantung, North China). By R. Swinhoe, H.M. Consul. (Plate III.) [Concluded.] 114

VIII. Letters, Announcements, &c.:—

Letters from Mr. J. H. Gurney, Jun., Mr. Andrew Anderson, Mr. Swinhoe (two), Herr A. B. Meyer, and Lord Walden . . 140

Number XVIII., *April*.

IX. Notes on the *Trochilidæ*. The Genera *Chlorostilbon* and *Panychlora*. By D. G. Elliot, F.L.S. &c. 149

Page

X. Notes on the Birds of Heligoland in Mr. Gätke's Collection. By JOHN CORDEAUX 172

XI. The Birds of Transylvania. By CHARLES G. DANFORD, F.Z.S., and JOHN A. HARVIE BROWN 188

XII. On the Nidification of certain Indian Birds. Part IV. By ANDREW ANDERSON, F.Z.S. 199

XIII. Synopsis of the Species of the Subfamily *Diglossinæ*. By P. L. SCLATER, M.A., F.R.S. (Plates IV., V.) 204

XIV. Notes on a 'Catalogue of the Accipitres in the British Museum,' by R. Bowdler Sharpe (1874). By J. H. GURNEY . 221

XV. Notes on Severtzoff's 'Fauna of Turkestan' (Turkestanskie Jevotnie). By H. E. DRESSER 236

XVI. Descriptions of some supposed new Species of Birds. By Major GODWIN-AUSTEN, F.Z.S., and ARTHUR, Viscount WALDEN, F.R.S. 250

XVII. Contributions to a History of the *Accipitres*. Notes on Birds of Prey in the Museum at the Jardin des Plantes and in the Collection of Mons. A. Bouvier. By R. BOWDLER SHARPE, F.L.S., F.Z.S., &c., of the Zoological Department, British Museum 253

XVIII. Notices of recently published Ornithological Works. 261

XIX. Letters, Announcements, &c.:—

Letters from Mons. Léon Olphe-Galliard, Mr. J. H. Gurney, Viscount Walden, Dr. Elliott Coues, and Professor Newton . . 267

NUMBER XIX., *July*.

XX. On the Birds of the South-eastern Subdivision of Southern Ceylon. By W. VINCENT LEGGE, Lieut. R.A., F.Z.S. . 273

XXI. The Birds of Transylvania.—Part II. By CHARLES G. DANFORD and JOHN A. HARVIE BROWN 291

XXII. On the Nidification of certain South-Indian Birds. By RHODES W. MORGAN 313

XXIII. Contributions to a History of the *Accipitres*. The Genus *Strix* of Linnæus and its type. By R. BOWDLER SHARPE,

Page

F.L.S., F.Z.S., &c., of the Zoological Department, British Museum 324

XXIV. Description of an apparently new Species of Teal from Kerguelen's Island. By R. Bowdler Sharpe, F.L.S. &c. 328

XXV. On some Birds from Spanish Guiana collected by Herr Müntzberg. By August von Pelzeln 329

XXVI. Notes on Severtzoff's 'Fauna of Turkestan' (Turkestanskie Jevotnie). By H. E. Dresser 332

XXVII. Note on *Palæornis exsul*. By Alfred Newton, M.A., F.R.S. (Plate VII.) 342

XXVIII. On *Turdus javanicus* of Horsfield, and its allied form *Turdus schlegeli*. By P. L. Sclater, M.A., F.R.S. (Plate VIII.) 344

XXIX. Ornithological Notes from the District of Karen-nee, Burmah. By Robert Wardlaw Ramsay 348

XXX. Notes on a 'Catalogue of the Accipitres in the British Museum,' by R. Bowdler Sharpe (1874). By J. H. Gurney. (Plate VI.) 353

XXXI. Additional Notes on the Birds of the Islands of Masafuera and Juan Fernandez. By Osbert Salvin, M.A., F.R.S. 370

XXXII. Notes on *Rhipidura rufifrons*, with a Description of its Eggs and Nest. By Edward P. Ramsay, C.M.Z.S. &c. . 377

XXXIII. A few stray Notes on African Birds. By Capt. G. E. Shelley, F.R.G.S. 379

XXXIV. Descriptions of five new Species of American Birds. By George N. Lawrence. (Plate IX.) 383

XXXV. Letters, Announcements, &c.:—

Letters from Mr. H. E. Dresser, Mr. W. T. Blanford, Mr. Sclater, and extracts from a letter from Baron A. von Hügel; News of M. d'Albertis in New Guinea; New Ornithological Works 387

Number XX., *October*.

XXXVI. On the Birds of the South-eastern Subdivision of

Page

Southern Ceylon. By W. VINCENT LEGGE, Lieut. R.A., F.Z.S. [Conclusion] 395

XXXVII. The Birds of Transylvania. By CHARLES G. DANFORD and JOHN A. HARVIE BROWN. [Conclusion] 412

XXXVIII. Description of a new Flycatcher belonging to the Genus *Myiagra*, and Notes on some other Fijian Birds. By E. L. LAYARD, Administrator of the Government of the Colony of Fiji 434

XXXIX. List of Samoan Birds, with Notes on their Habits &c. By the Rev. S. J. WHITMEE 436

XL. On the Contents of a second Box of Birds from Hakodadi, in Northern Japan. By R. SWINHOE 447

XLI. Notes on Birds from Burma. By ARTHUR Viscount WALDEN, F.R.S. 458

XLII. Remarks on the Species of the Tanagrine Genus *Chlorochrysa*. By P. L. SCLATER, M.A., Ph.D., F.R.S. (Plate X.) 464

XLIII. Note on *Chalcopelia brehmeri*. By Dr. O. FINSCH . 467

XLIV. Notes on a 'Catalogue of the Accipitres in the British Museum,' by R. Bowdler Sharpe. By J. H. GURNEY . . . 468

XLV. On the Immature Plumage of *Rhodostethia rosea*. By HOWARD SAUNDERS, F.L.S., F.Z.S. 484

XLVI. Notes on some New Central-Asiatic Birds. By Dr. N. SEVERTZOFF 487

XLVII. Notices of recently published Ornithological Works. 494

XLVIII. Letters, Announcements, &c.:—

Letters from Messrs. E. P. Ramsay, H. E. Dresser (two), A. B. Brooke, J. H. Gurney, J. H. Gurney, jun., J. A. Harvie Brown, Robert Swinhoe; news of the Arctic Expedition; Mr. Dresser's reprint of Eversmann's 'Addenda;' discovery of unpublished letters of Gilbert White 512

XLIX. Obituary:—

Notice of the death of Sir William Jardine, of Carl J. Sundevall, and of Dr. John Edward Gray 522

Index 527

PLATES IN VOL. V.

FOURTH SERIES.

		Page
I.	Glaucidium gnoma	38
II.	Fig. 1. Glaucidium pumilum Fig. 2. Glaucidium griseiceps	41
III.	Porzana exquisita	135
IV.	Diglossa pectoralis	212
V.	Diglossa albilateralis	216
VI.	Accipiter ovampensis	367
VII.	Palæornis exsul	342
VIII.	Turdus javanicus	346
IX.	Fig. 1. Chlorospingus? speculiferus Fig. 2. Serpophaga leucura	383
X.	Chlorochrysa nitidissima	466

ERRATA ET CORRIGENDA.

Page	Line	
27,	19,	for *cinereus* read *kuhli.*
50,	10,	for *lansberi* read *lansbergi.*
68,	8,	*for* FULIGULA *read* FULVIGULA.
73,	26,	*for* LETSITSIRUPA *read* LITSISIRUPA.
85,	17,	*for* EUPODOTUS *read* EUPODOTIS.
112,	18,	*for* VITTATA *read* VITTATUS.
121,	5,	for *Euphona* read *Eophona.*
128,	35,	for *maculosus* read *maculatus.*
275,	14,	for *bataviensis* read *batassiensis.*
335,	11,	*for* MYIOPHONEUS *read* MYIOPHONUS.
361,	26,	for *breviceps* read *brevipes.*
389,	29,	*for* Sidney *read* Sydney.
390,	12,	
393,	24,	
393,	10,	for *brachipus* read *brachypus.*
403,	13,	*for* LEPTOPTILU JAVANICU *read* LEPTOPTILUS JAVANICUS.

THE IBIS.

THIRD SERIES.

No. XVII. JANUARY 1875.

I.—*Cruise of the 'Zara,' R. Y. S., in the Mediterranean.*

By Lord Lilford.

It is so long since I have written any thing for this Journal, that I fear that many Members of the B.O.U., more especially those lately elected, may consider that the President is a myth, who never appears at the Annual Meetings, and merely exists as a sort of conventional fiction. I resume the pen, then, partly to assure such Ibises that I have a real existence, and, though latterly prevented by illness from attending the Annual Meetings of our Society, that my interest in the said Society is in no way diminished, and my ardour for ornithology very much augmented. I hope I may be forgiven for saying this much entirely about myself; but I really feel that, before recording the few following facts, some kind of introduction is becoming, although not strictly necessary, on my part. Since I last wrote in this Journal, I have visited Spain, the country of my predilection, three times; but although, on two of these occasions, I had fair ornithological success in Andalucia, that district has been so much more thoroughly explored by my friend Colonel Irby, to whose accurate powers of observation and ardour in the cause European ornithologists must ever be greatly indebted, and so much has been written by another of our fraternity, Mr. Howard Saunders, that I hardly considered myself justified in asking for space in 'The Ibis' to record things of Spain. I may, however, mention that during one of the above-mentioned visits to Spain I had the satisfaction of discovering an undescribed species of bird, viz. *Calandrella bœtica*, Dresser, 'Birds of Europe,' and of thoroughly investigating the breeding-habits of the Spanish Imperial Eagle (*Aquila adalberti*), recently specifically separated from the Eastern species (*Aquila mogilnik*). I may add that there is still plenty of ground in old Spain for enterprising naturalists; and let us hope that when a Spanish monarch is once more on the throne of that glorious but unhappy country, and things become more settled therein, some of our increasing flock of Ibises may migrate thither, and reap a rich harvest. This may be a thing of "mañana;" but, as the natives say, "Ojala Dios!" It is my purpose in this paper to relate my principal ornithological observations during a yacht-cruise in the Mediterranean, extending from the end of December 1873, till the end of June 1874, and to show how much may be done comparatively near home even by a naturalist so incapacitated by lameness as myself.

I despatched my yacht, the 'Zara,' R. Y. S., from England for Toulon about the end of October 1873; and we started from England, *viâ* France, about the middle of the following month to join her at the latter place. After being detained by gales of wind at the North Foreland, taking in stores at Plymouth, and being again driven back and detained at Falmouth for more than a week by a furious south-wester, she reached Gibraltar November 16th, after an eight days' run from Falmouth, and was detained at Gibraltar for three days by that curse of "the Rock," a furious "levanter." After encountering very bad weather and calms, and being obliged to take shelter in Port Mahon for nearly a fortnight, she eventually reached Toulon, where the authorities kindly put her in quarantine for three days because the Captain had not obtained a *visa* of the French Consul at Port Mahon, for the good reason that after diligent researches he had been unable to find, or hear of, any such functionary at that port. The yacht had lost some copper; and I was obliged to put her into dry dock for repairs, having to go through innumerable useless ceremonies, and visit innumerable bureaux before I could get any thing done. It appears incredible, but I had no less than sixteen official documents to sign and deliver at some twelve different bureaux before the dockyard authorities would oblige me by accepting the money due for hire of dry dock and work upon the vessel.

I need hardly say that on our way through France, and at Toulon, I had seen hardly any thing worthy of remark, ornithologically speaking—an Eagle Owl hanging up in a poulterer's shop at Marseilles (which I was informed was not "une pièce de gibier, mais pour les amateurs"), some young Blue Rock-Thrushes alive, and various species of Ducks, some Woodcocks, Snipes, and Godwits in the market. A locality more entirely destitute of birds than the environs of Toulon I never saw. With the exception of a considerable number of Gulls (*Larus leucophæus, L. melanocephalus, L. ridibundus*, and *L. canus*), I literally hardly saw any bird but a few Sparrows, all here *P. domesticus*, a solitary Kingfisher, and a pair of Wall-creepers (*Tichodroma muraria*), in the gorge of Ollioule, some miles from the town. Notwithstanding this absence of feathered fowl, I, wishing to be entirely "en règle," spent three days in procuring a "permis de chasse," being sent from Consul to Mayor, from Mayor to Préfet, and from Préfet—I was going to say, about my business; but my business was a "permis," and Monsieur le Préfet, or Sous-Préfet, sent me away, and said the official forms could not be officially ready before to-morrow. We talk of Spanish procrastination; but with good temper and courtesy, and an occasional cigar, a Spanish official will be ready (he is too much of an Arab to be anxious) to oblige a stranger. In Spain there is no system; and in unhappy France system is the curse of the country, and the result is, an amount of petty official swagger, and a swarm of bureaux, especially provoking to an Englishman, who is generally in a hurry, and cannot understand why he cannot have any article that he is ready to pay for there and then. Having, as I say, after three days of perfectly unnecessary driving from pillar to post, obtained the precious document, and thinking I might perhaps get a Gull or two in the harbour, I took a boat, and stood away for the extreme west corner of the fine bay to a spot where my boatman informed me we should find many ducks, and perhaps get a shot. The Gulls, though swarming in the small inner harbour, where shooting is not allowed, took such good care of themselves out in the bay, that I could not get a shot; the ducks were of course a myth; and the only birds I saw were the Kingfisher mentioned above, and a few Crossbills in a pine-wood, which also perfectly understood the meaning of a gun. I think my old boatman, an old man-of-war's man, who had been a prisoner in England during Napoleon's war with us, wished to revenge his wrongs; for not content with taking me, as a representative of "la perfide Albion," in pursuit of imaginary ducks, he further persuaded me to fish in a blazing sun and thirty fathoms of water, for a whole day, the sole result being the capture of a few very small "bogues" (a perfectly worthless fish) and a sharp attack of rheumatic gout, brought on by the sudden piercing chill at sunset after the great heat of the day. Experience is invaluable; but I certainly, on this occasion, paid a high price in learning that sport, in the south of France at all events, is a delusion and a snare, and that the inhabitants are, as a rule, wholly untrustworthy. I was laid up for three weeks, fortunately in a good hotel, and well attended by our Doctor, Mr. Sidney Morris, who accompanied us through the cruise, and to whose activity and eagerness for *la chasse* I am indebted for many of my specimens. Being just able to move, I went on board the yacht on 26th of December, and sailed the following day for Cannes. The coast is exceedingly beautiful; and the weather was fine. We lay one night in the roads of Hyères. On these islands there really is some shooting, as they are preserved; and I hear (from an Englishman) that there are a fair number of Partridges and rabbits, and occasionally considerable flights of Woodcocks and wildfowl. There is a great breeding-place of Gulls on la Gabinera, a rocky islet south of the middle island: but I was not in a condition for exploration; so we sailed again for Cannes on the 29th, and, with light head-winds and calms, arrived there at 9 P.M. the same day, seeing no birds on our way but a few Gulls and two or three Shearwaters. At Cannes we remained three zoologically profitless weeks, and I had a return of my malady, which prevented my ever getting ashore; but we found many friends amongst the large and steadily increasing English colony there, whose attention and kindness made the time pass quickly. My yacht-steward, who had passed many years collecting and preserving objects of natural history in Australia, and is a good hand at the business, brought me off various birds from the market, amongst others, *Turdus torquatus, Coccothraustes vulgaris, Caccabis rufa, Caccabis petrosa* (from Sardinia), *Anas clypeata, A. crecca, A. acuta, Mareca penelope, Fuligula ferina, Mergus merganser,* and *Scolopax rusticola.* A friend whom we found there, a Highlander, and devoted to the gun, told me that amongst the pine-clad hills which surround Cannes, he had in about two months' constant rambles met with two Woodcocks, four Partridges, an Owl, and many foxes; so I cannot recommend Cannes as a shooting-locality. The climate is certainly fine; but in all this part of the Mediterranean coast the sudden piercing cold at sunset is especially to be guarded against, and must, I think, be prejudicial to the class of invalids who principally resort thither. The Russians and our Transatlantic cousins have monopolized Nice, the climate of which place, *pace* the faculty, is in my opinion simply abominable; and our country people have gone to the eastward, and are establishing themselves along the lovely Riviera from Mentone to Savona, where the climate in winter really is fine, and the country interesting and comparatively little known. I speak from experience, having passed some nine months in this part of Europe, and sailed, walked, ridden, driven, and steamed along and almost all over it. I found that, while to the westward of the Maritime Alps the peasantry are boorish, uncivil, and rapacious, to the eastward of that chain they are simple-minded, lively, honest, and obliging; but no doubt increasing civilization and the influx of foreigners will soon change all this, and a travelling Englishman will be considered, as in other places, a sort of mint which issues good coin without getting any thing in return but fine air and such amusement as his own resources may provide for him. We left Cannes January 19th, with beautiful weather; but we had no wind, and for four days just crept along the coast, which is so exceedingly beautiful that we could hardly regret the delay, as we were not pressed for time, and the deck of a good yacht in fine weather furnishes perhaps as pleasant a lounge for a convalescent as can well be imagined. At length, on the morning of Jan. 22, we got a fair breeze, and arrived at Genoa about 9 A.M. I had not visited this beautiful city for many years, and was now prevented from going ashore much by my lameness. I had the pleasure, however, of making the acquaintance of the Marchese Giacomo Doria, a hardworking and accurate naturalist, and an excellent good fellow, who was kind enough to do me the honours of his new Museo Civico on the Acquasola, to present me with various scarce reptiles in spirits, and to furnish me with a great deal of valuable information on all my favourite branches of zoology. The chief treasures of the European ornithological collection in the above-mentioned Museum are the following—a fine specimen of *Falco eleanoræ,* killed near Genoa, many rare Buntings (e. g. *Emberiza pityornis, E. aureola, E. pusilla, E. lesbia, E. cæsia*), *Turdus fuscatus, Merops persicus, Erythrosterna parva, Actiturus bartramius, Francolinus vulgaris,* and, last (though not least), that great prize of the Mediterranean *Larus audouini.* With the exception of the Francolin, all these birds were obtained in Liguria, most of them in the immediate neighbourhood of Genoa; and more beautifully mounted specimens could hardly be. The *Larus audouini* was killed near Savona, and is in winter plumage; there is, I believe, another specimen in the University Museum of Genoa, also obtained in the neighbourhood. The Francolin was obtained by Doria from Sicily, some four or five years ago, already stuffed; and though he (Doria) showed it to me in a rather triumphant manner, as a proof that my theory of the extinction of the species was incorrect, I can hardly admit it as such proof, as he knew nothing of the date of its capture. I may here mention, on this favourite subject, that in leaving England I had proposed to visit the island of Cyprus, expressly to see the Francolins in their native haunts; but I was prevented from so doing by a variety of causes; and about the birds in Europe, properly so called, I have hardly any thing to add to what has already appeared in this Journal from the pen of my friend Mr. Howard Saunders. Salvadori, in his most interesting work on the ornithological fauna of Italy, which was presented to me by the Marchese Doria, says, it seems to him that Mr. Saunders and I were premature in proclaiming the extinction of the species in Sicily; and I am perfectly willing and very glad to admit that this is the case, as will be seen from Mr. Saunders's papers above mentioned; but from all that I could learn subsequently in Sicily, not a single specimen has fallen into the hands of any naturalist since 1869; and, for many years before that, the occasional rare occurrence of a solitary individual in the old haunts of the species only went to prove that, although strictly speaking not completely extinct, the species was rapidly becoming so; and in spite of the diligent personal researches of more than one competent naturalist, one could never depend on shooting, or seeing, a Francolin, or even hearing its sonorous cry in its favourite localities, for at all events twenty years past. In the harbour of Genoa were great numbers of *Larus leucophæus, L. ridibundus, L. melanocephalus,* and some few of *Larus canus.* I did not see *Larus fuscus* in adult plumage; but amongst the many brown-feathered gulls at Genoa I have little doubt that it existed. It is not an uncommon bird in the western portion of the Mediterranean; but immature specimens are more frequently met with than the adults. In the gardens of the Museo Civico at Genoa, Doria showed me an Eagle alive, which I have no doubt was *Aquila rapax*; but the locality whence it came was unfortunately not known. The Museo will soon be, under the able care of the Marchese, one of the best-arranged museums of zoology in the world; and I am sure that all English naturalists will wish god-speed to an institution so thoroughly well managed, so competently governed, and so delightfully situated as this. I was rather surprised to find our English Grey Partridge (*Perdix cinerea*) pretty abundant in the market, as, although tolerably common in some parts of the plains and lower hills of northern Italy, I had always thought that it avoided Liguria, in which province I never met with it in my former shooting-rambles. I may perhaps be allowed to say a few words here on the distribution of the four European species of Partridge, which is certainly curious, and, I think, not much understood. The Common Redleg (*Caccabis rufa*) is *the* Partridge of Spain from Irun to Tarifa, and from Lisbon to Barcelona. The Barbary Partridge (*Caccabis petrosa*) is found in that country on the Rock of Gibraltar only, no doubt introduced by man from the opposite coast; this species seems never to quit the Rock, where it is well protected. Within a few miles *Caccabis rufa* is tolerably abundant, but (I speak under correction) is never seen on the Rock itself. Throughout the Barbary States of the Mediterranean *C. petrosa* is the common and, I think, the only true Partridge.

To return to Spain, the Grey Partridge is pretty common in some of the north-western provinces, notably in those of Leon and Asturias. I met with it sparingly in the Pyrenees of Aragon, and have been informed of its occurrence as far south as Murcia. There is a tradition of the former existence of *C. petrosa* in that province, in the neighbourhood of Cartagena; but it has now disappeared there, *more* Francolinorum in Sicily.

As I have before stated in this Journal, I have never been able to meet with *C. saxatilis* alive or dead in Spain; and, as far as I know, there is no tradition of its existence in that country, though it is not uncommon in some parts of Southern France. In the latter country *Caccabis rubra* and *Perdix cinerea* are the prevailing species, whilst *Caccabis saxatilis* (the Bartavelle) is tolerably common in many places suitable to its habits, especially the Jura, the Hautes Pyrénées, and the Alpes Maritimes. I do not think it can be called common; in fact no game bird *is* common in France, except where strictly and artificially preserved; but I found a fair number of these Bartavelles for sale in the Paris poulterers' shops in November, which I was informed came principally from the South. In Switzerland the Bartavelle is found sparingly in the mountains; and I think that the frontiers of that Republic and the State of Baden are about the limit of its northern range. I believe (but here I speak under correction) that the present species is met with throughout the mountains of Southern Germany, the Tyrol, and Styria. I have specimens from the latter province. I am not aware that it is found in the Carpathians, though it is probable that it exists in the eastern portion of that chain. *Perdix cinerea* is *the* Partridge of Germany, generally speaking; I do not know that *Caccabis rufa* is indigenous in any part of that country, though it has spread into Belgium and some portions of the Netherlands. Returning to Italy, we find *C. saxatilis* more or less common throughout the Alps and Apennines, becoming more common as we go southwards. *C. rufa* is found also in many parts of Italy, notably in Tuscany, but decidedly becomes scarce in the southern provinces. I never met with a specimen in the markets of Naples. *Perdix cinerea* is found in the plains throughout Italy. In the islands of the W. Mediterranean *C. rufa* is found in the Balearics, where it is the only species of the family, as I believe is the case in Corsica and Elba. In Sardinia *C. petrosa* is the only species found, whilst in Sicily, in spite of the assertion of Monsieur Malherbe, no Partridge but *C. saxatilis* is indigenous; and I am not aware of the introduction of any other species into that island. In the Ionian Islands, Styria, Dalmatia and throughout European Turkey, *C. saxatilis* (sive *græca*), and *Perdix cinerea* are, I believe, the only species; and I think I am correct in stating that the latter is *the* Partridge of the Danubian principalities. In European Russia, as far as I can find out, no species of *Caccabis* is found, whilst, on the other hand, *Perdix cinerea* is in some places very abundant.

Pallas, in his 'Zoographia Rosso-Asiatica,' tome ii. p. 79, appears to have considered the three species of *Caccabis* as only local races, of which three, I suspect, *Caccabis græca* was his typical form, as in his short diagnosis he does not mention either the black spots below the collar of *C. rufa,* or the chestnut colour and white spots of *C. petrosa.* But I must return to the yacht, and can only hope that this long digression about my favourite game birds may be pardoned, and perhaps be of service to some brother ornithologists or sportsmen desiring of making acquaintance with the foreign members of this interesting and, generally speaking, estimable family.

We left Genoa January 30, and with light airs of wind got into the splendid Bay of Spezia early in the afternoon of the next day. We remained there, enjoying the matchless beauty of the scenery, with fine weather, till February 3, when we sailed for Leghorn. Great numbers of Gulls, principally *L. ridibundus* and *L. melanocephalus,* frequent the Bay of Spezia, with some *L. leucophæus,* a few *L. canus*; and I also distinctly made out one *Rissa tridactyla,* which, as far as my observation goes, is by no means a common bird on the Mediterranean coasts. We got into Leghorn about daylight, February 4, and immediately drove off to Pisa, some ten or twelve miles. On the way I noticed the following species of birds—*Falco tinnunculus, Corvus frugilegus, Passer italiæ, Fringilla chloris, F. carduelis, F. cœlebs, Motacilla alba, Anthus ?, Galerita cristata, Columba œnas,* and an *Ardea,* at a great distance, which looked very white in the bright sunlight, but may have been *A. cinerea.*

At Pisa I had, unfortunately, no time to visit the Museum, but, amidst the many attractions of that beautiful city, did not forget to pay my humble tribute of respect at the tomb of Paoli Savi, in the Campo Santo. We left Leghorn the next morning at daylight for Naples, with a very light northerly wind, which carried us about six miles on our course, and left us becalmed till about 1 P.M., when a delightful breeze crept up to us from N.N.W., and we span along at from seven to eleven knots till about 10 A.M., February 6, when it fell calm again till 1 P.M, when we got the same breeze till midnight; it then left us rolling in a calm, with a very heavy swell off the westernmost point of the island of Ischia. With occasional light puffs of wind we crept into the port of Naples about 4 P.M., February 7. Except the Gulls above mentioned, the only birds seen during this run were two flocks of some small species of *Tringa* coming from the westward, some fifteen miles from the Italian coast, many Shearwaters (*Puffinus kuhli* and *P. yelkouan*), and one Razor-bill (*Alca torda*). Just south of Ischia we saw a very large Seal, and a large Cetacean, probably a Thrasher, which for a long time kept lashing the water with its tail, making the spray fly to a great height with a report like the discharge of a small field-gun.

We remained at Naples till March 4, being detained by the loss of our rudder in a sudden furious squall of wind, which caused the yacht to drag her anchor and go stern on to the Mole, fortunately sustaining no greater damage than the loss above mentioned; but the weather generally speaking was so bad, wet and cold, that, as the shipwright worked in the open air, the new rudder took a long time making. The officials of the dockyard sent me in a longish bill, but showed me every attention and civility; and as we were most cordially and hospitably received in the house of a relative, our time passed quickly away in spite of constant bad weather and the contretemps just mentioned.

In the market of Naples I saw the following species of birds—Common Jay, Chaffinch, Serin Finch, Goldfinch, Italian Sparrow, Stonechat, Skylark, Woodpigeon, Greek Partridge, Barbary Partridge, Grey Partridge, Spotted Crake, Lapwing, Golden Plover, Little Bustard, Black-tailed Godwit, Ruff, Woodcock, Common Snipe, Jack Snipe, Wild Duck, Pintail, Gadwall, Shoveller, Teal, Wigeon, Red-headed Pochard, and one Smew. In our drives about the country we noticed very few birds; I think, besides those mentioned above, we only saw a few common Kestrels, a Sparrow-Hawk or two, some Robins, and now and then a Blue Rock-Thrush. In the garden of the house in which we were living I observed White Wagtail, Grey Wagtail, Blackbird, Song-Thrush, Chiffchaff, Blackcap, Black-headed Warbler, and common Wren. The usual Mediterranean Gulls frequented the harbour in large numbers; and I obtained specimens of *Larus canus, L. leucophæus, L. melanocephalus,* and *L. ridibundus*; the first mentioned was decidedly the least common, and the third the most abundant species of Gull during our stay at Naples. The weather, as I have mentioned, was so cold and wet that we were prevented from seeing much of the neighbourhood; but we went of course to Pozzuoli, Baiæ, Astroni, Capo di Monte, and from Torre del Annunziata, whither I sent the yacht, to Pompeii.

The lake of Avernus has lost its ancient deadly character; and we saw many Coots and Dabchicks taking their pleasure thereon, whilst Blackbirds and Robins were whistling gaily in the surrounding copses without the slightest perceptible symptom of approaching asphyxia. I noticed a great many bats flying in the broad sunshine, and succeeded in knocking one down with the carriage-whip, which proved to be a specimen of *Vespertilio schreibersi.* I distinguished many other species, notably *V. murinus,* but could not persuade the natives to preserve me specimens of any of this interesting order of animals. I made acquaintance with Prof. G. Palma, of the University, who courteously did me the honours of the Zoological collections belonging to that institution, and also showed me a small private collection at his own house.

The University Museum contains a fair local collection of birds; but the setting-up and mounting is lamentable, and the ornithological department altogether unworthy of such a city as Naples. Prof. Palma's collection contains several specimens of *Larus* in various plumages, which completely puzzled me, exhibiting, as they did, many characteristics of both *Larus melanocephalus* and *L. ridibundus.* I came very reluctantly to the conclusion that they must be hybrids; but I hope I am wrong, and that our friend Mr. Saunders, who has devoted so much attention to this family, may some day see them and enlighten us. I obtained my principal information about sport in the southern provinces from Cavaliere Mario Mattino, who is Grand Veneur to the King. He informed me that bears still exist in some parts of the Abruzzi, wolves are common in the mountains, foxes swarm. I could obtain no positive information about the lynx. Wild cats and both species of marten are tolerably (or I should, as a game-preserver, perhaps say intolerably) common, otters and badgers less so, wild boars very abundant. The porcupine is gradually becoming scarce; hares and rabbits exist in the preserved districts. Of the genus *Cervus*, Cavaliere Mattino seemed to consider that *C. capreolus* and *C. elaphus* are indigenous, though the latter is very rare except in the royal preserves, whilst *C. dama* is, he thinks, decidedly an imported species. Of winged game, strictly speaking, Pheasants having been introduced, *Caccabis saxatilis*, *Perdix cinerea*, and *Coturnix communis* are the only representatives; but the numbers of winter fowl, Woodcocks, Snipes, and especially Ducks, of many species, are occasionally almost incredible, particularly during this last season, which was exceptionally severe throughout Southern Europe. The King, a few days before our arrival, had killed 180 Ducks to his own gun at Licola; but His Majesty is a sportsman in the true sense of the word, and fears danger, difficulty, and fatigue as little with the fowling-piece or rifle as with the sword or the more troublesome weapons of State policy. He is devoted to shooting of all kinds, but prefers the wilder forms of sport; and whilst the mountains and valleys of Northern Italy ring with his praises as a good fellow and first-class hunter of Ibex and Chamois, even in the languid south, where his fearless and manly qualities are less appreciated, he is universally allowed to be "*famoso cacciatore.*"

We at last left the beautiful Bay of Naples for Messina on the morning of March 7th, and, with light airs of wind, got some miles south of Stromboli by midday of the 9th, when a furious wind met us, blowing directly out of the Straits; and as the current was also running some eight or ten knots in the same direction, we ran under the lee of the Sicilian land, and brought up in a little sandy bay some five or six miles west of the Faro for the night, and worked into the harbour of Messina by 9 A.M. on the following morning, where we remained till the 16th of March, almost entirely confined to our vessel by continual storms of rain, thunder, wind, and snow. I observed some Sandwich Terns (*Sterna cantiaca*) and the first House-Martins of the season on the 12th about the Faro.

We sailed again, March 16th, for Taormina, and anchored in the bay at 1 P.M., seeing on our way several little Gulls (*Larus minutus*), some large flocks of Cranes passing northwards high over head, and a few Purple Herons going in the same direction, and on the rocks about Taormina a few Rock-Doves, Kestrels, a Kingfisher, some Blue Thrushes, and two Black Redstarts. We went on to Catania the next day, seeing nothing remarkable but a flight of ten Vultures crossing to the Italian coast at an immense height up in the clouds. The scenery of the Straits of Messina and the Sicilian coast is magnificent. Etna, which I had only seen before at a distance of some seventy miles, was covered with snow from the summit quite halfway down to the sea; and the contrast of the dazzling white with the black lava-fields and the rich green of the lower slopes and maritime strip produced a most superb effect, and put the undeniably beautiful Bay of Naples and Vesuvius quite into the shade. At Catania, a very pleasant, cheerful, well-built town, with a good market, we remained till March the 30th, making many excursions to the Pantani, some very extensive marshes at the mouth of the river Simeto, and another stream which runs into the sea some miles further to the south. These marshes are a complete Paradise for the ornithologist, and in the winter afford unrivalled Duck- and Snipe-shooting. They may be easily reached by road from Catania; in fact, within two miles of that town there are fine Snipy-looking meadows and swamps on both sides of the road; but our usual plan was to get away in the yacht's cutter pretty early in the morning and sail or row off to the mouth of the small river above mentioned, where there is a bar with very little water, pull a short distance up the stream to a sort of pothouse kept by the lessee of the fisheries, and there take punts to explore the reed-jungles of the lagoons. Before arriving at the mouth of the river, we generally had an interview with large flocks of Ducks of various species, principally common Wild Duck and Mallard, Gargany, Pintail, Tufted Duck, Teal, Red-crested Pochard, Common Pochard, and Wigeon. But as the wind was generally light and did not favour us, we did not succeed in bring many of these to bag. We obtained, however, some fine specimens of Black-headed Gull (*L. melanocephalus*) with complete black head, and one or two Sandwich Terns, which last was the only species of *Sterna* we observed here. On our first visit to the marshes we found a great many Snipes; but they were very wild, I was very lame, and the doctor, though he plunged gallantly into the mud and water, was not accustomed to sniping, and our bag was not so full at the end of the day as it might have been. The doctor's Snipe-shooting rapidly improved; but unfortunately the birds became scarcer every day, till, at the end of time in these *"cari luoghi"* we had to search diligently to find a Snipe at all. The same may be said of most of the wading birds, of which at first we found great numbers, such as common Curlew, Whimbrel, possibly Slender-billed Curlew, Pewit, Golden Plover, Avocet (never abundant), Oyster-catcher, Black-winged Stilt, Greenshank, Marsh-Sandpiper, Dusky Redshank, Common Redshank, Green Sandpiper, Wood-Sandpiper, Ruff and Reeve, Pygmy Curlew, and Dunlin, all of which we made out positively, and several of which we obtained. Of the Ardeidæ, we only met with *Ardea cinerea* and the common Bittern (*Botaurus stellaris*), which last is common and breeds in the country. The migratory Herons, with the exception of the Purple (*Ardea purpurea*), which was constantly passing but did not appear to rest in the marshes, had not yet arrived in force; and, besides those above mentioned, we only saw two Little Egrets (*Egretta garzetta*). The lagoons swarmed with Coots (*Fulica atra*); and we constantly heard, but on one occasion only obtained a fleeting glimpse of, the Purple Waterhen (*Porphyrio veterum*). This bird is by no means rare in these marshes, but seldom appears in the open water, and haunts the highest and strongest reed-brakes, where it is always difficult, and often impossible, to shove a boat along. I found one nest of this bird exactly resembling, and not conspicuously larger than, that of our common Waterhen (*Gallinula chloropus*), which is extremely abundant here. This nest was placed on the water in a thick mass of growing flags, and contained one egg; this was on March 31st. The Spotted, Baillon's, and Little Crakes are all common, the former very abundant; and we also found several Water-Rails (*Rallus aquaticus*). Besides the Ducks above mentioned, I observed the White-eyed Pochard (*Fuligula nyroca*) in great numbers, and shot several specimens; and Gadwalls and Shovellers were also pretty common. I have no doubt that *Anas boschas, A. clypeata, A. strepera, Branta rufina,* and *Fuligula nyroca* breed in these marshes, possibly also *Anas querquedula,* and a species which I had forgotten, but may mention as tolerably common, viz. the White-headed Duck (*Erismatura mersa*). I was surprised at the paucity of Raptores; with the exception of one common Kite and a few Kestrels, we saw nothing but Harriers. And another surprising fact was that we did not see a single *Podiceps* of any species, though the whole of the district is apparently admirably suited to their habits and swarming with fish—grey mullet, tench, and eels. To return to *terra firma,* the most conspicuous bird was the common Magpie, which is very abundant, and breeds all over the country, high and low. We now and then saw and heard a Raven. Some Hooded Crows (*Corvus cornix*) frequented the sandhills which extend from Catania between the marshes and the sea for many miles; and the Jackdaw is very abundant. The common Jay (*Garrulus glandarius*) is found in the wooded portions of Etna (I observed it near Nicolosi). We saw a few common Kingfishers (*Alcedo ispida*) on the banks of the rivers; the Swallow tribe were increasing in numbers every day; we saw all the common European species of this family, the great arrival of the common Swallow and Alpine Swift occurring on the same day, viz. March 24th. I feel no doubt in my own mind that on that day I also saw more than one of the eastern Chimney-Swallow (*Hirundo rufula*); but as we were in a carriage and our guns in their covers, we did not obtain a specimen; and I do not like to record the occurrence of a species so similar to the common Swallow as a positive fact, though the bird is by no means uncommon on passage in several parts of Sicily. *Cotyle rupestris* I saw in the craters of the Monte Rossi, above Nicolosi; *C. riparia* was the least common of the family. I noticed many Blackbirds and Song-Thrushes on the skirts of the marshes; and Black Redstarts are common and resident in all suitable localities. The reed-brakes and swamps teem with Warblers, amongst which Cetti's Warbler is conspicuous by his thrilling note; I recognized also the song of Savi's Warbler (*Calamodyta luscinioides*), our common Reed- and Sedge-Warblers (*C. arundinacea* and *C. phragmitis*). *Cisticola schœnicola* is very abundant; and in the dense jungle of the Pantani there were at least three other species, probably *Calamodyta aquatica, C. melanopogon,* and another which I had never heard and, I think, never seen before; but I must here make a sad ornithological confession, and state that whilst exploring these marshes I was always on the special look-out for *Porphyrio veterum,* and my gun was loaded with large shot, so that I fired at nothing smaller than the Duck tribe. The above-mentioned Warblers, with the exception of *C. schœnicola,* frequent the dense beds of reeds and flags in some five or six feet of water and mud, whilst *Sylvia atricapilla* was common amongst the brambles of the dryer portions of the marsh. *S. melanocephala* I noticed in the Zoological Gardens of Catania, where it was evidently nesting in the shrubberies; and this, I think, brings me to an end of the family. I may state that all the above-mentioned Sylviidæ and many other species are recorded from Sicily by various authors; and a more suitable home for them than the Pantani could hardly be imagined. In the market of Catania I met with no birds that I did not see alive out in the country. Calandra Larks, Goldfinches, Greenfinches, and Serins are the favourite song-birds, and *Passer salicicola* the only Sparrow we met with.

We drove out to the famous lake of Lentini, about fifteen miles from Catania, on 23rd March. This is a fine sheet of water, I should say, perhaps, twelve or fifteen miles in length, by some five in breadth in the widest part, is surrounded by good Snipe-marshes and thick reed-brakes. Its whole surface, as far as the eye could reach, was thickly dotted with birds, principally Coots (*Fulica atra*); but there were also many Ducks of the various species above mentioned; and here I met with the common Starling (*Sturnus vulgaris*) for the first and only time in Sicily. We found a sprinkling of Snipes, but they were exceedingly wild. I saw a large Solitary Snipe here, and the doctor afterwards killed one of this species at the Pantani; but it was not yet as common as it becomes in these regions on passage later in the spring.

We sailed from Catania on March 30th, ran down to the mouth of the river, and went ashore to shoot in the Pantani. On this occasion some of my crew killed about thirty snakes, principally *Tropidonotus natrix,* and a few of the fine dark variety of *Zamenis atrovirens,* known as *Z. carbonaria.* We laid off the mouth of the river in a dead calm all night, and, landing early to shoot, sent the yacht round to Agosta. After a long and rather profitless day on the Pantani, we hired mules and rode over an undulating fertile country to Lentini, about seven miles; and after an immense amount of bargaining and expostulations with our muleteers and a crowd of filthy and rapacious ruffians in a dirty *locanda,* and a meal of cold tench, we at length procured a carriage, and drove through a beautiful country with a brilliant moon eighteen miles to Agosta, where we arrived about midnight, and got on board the yacht just as our cutter (which we had left at the Pantani, to find its way round to Agosta) hove in sight. Agosta is a ruinous, wretched town; but the bay is very fine, and might be made into one of the best harbours in the Mediterranean by erecting a breakwater on the Hybla shoal.

We sailed at about 11 the next morning for Syracuse, and with a light breeze ahead beat into that port at about 4 P.M. An interpreter came off to us as soon as we had obtained pratique, and was not a little astonished at my telling him to send out the youth of Syracuse to collect bats, snakes, and lizards for me. He, however, complied with my directions, with considerable result, as will be seen further on. We spent the next day in visiting some of the many lions of Syracuse, viz.:—the Fountain of Arethusa, now frequented by vulgar Domestic Ducks and some common Water-hens; the Museo, where a large collection of very interesting antiquities are piled together in such confusion that it is impossible to examine them. Here we saw the beautiful Venus of Syracuse, which rivals, in my opinion, the best representations of the irresistible goddess that I have seen, and is yet but little known or spoken of in Western Europe. From the Museo we went to see a poor collection of stuffed birds at the Gabinetto, the most remarkable thing there being a specimen of the Nutcracker (*Nucifraga caryocatactes*), which the Curator assured me was killed in the neighbourhood. We afterwards drove out to see the quarries from which the stone was taken for the building of the four cities which composed the ancient Syracuse, and were much interested. The whole neighbourhood of Syracuse is pierced with galleries, tunnels, and tombs, and quarries of enormous extent. A great deal has been done in the way of exploration; but a very great deal more remains to be done, as the ground occupied by the ancient cities extends over an area of some fifteen or twenty miles. We made many excursions to various points in the vicinity, all full of interest to the most unlearned, and to an antiquarian, I should say, almost unrivalled. The natives of this corner of Sicily, though heavily taxed and wretched enough, are not such shameless and rapacious beggars and liars as about Messina and Catania; nor have they taken to highway robbery and murder, as is the case in the western and central parts of the island.

We of course took a boat up the Anapo, and by dint of towing, punting, pushing, and a good deal of objurgation on the part of our boatmen, succeeded in arriving at the famous fountain of Cyane, the source of the Anapo, where Proserpine is said to have made her final exit from the air above. The far-famed river is a small stream, densely choked with aquatic vegetation; the most interesting vegetable production is the papyrus, which grows in great luxuriance and is extremely graceful. I believe I am correct in saying that this is the only spot in Europe in which this famous plant is now found. There are fine Snipe-marshes on both sides of the river; but these birds had all but left the country, and we only saw some three or four. The usual marsh-birds were apparently common; but we saw nothing here which we had not previously met with in the Pantani. We found several nests of common Magpie in the papyrus, which in some places grows to a height of twelve feet or more. I had always heard great accounts of the Snipe and wild-fowl shooting in these marshes, and can well imagine it must be excellent at the right times of year; but there is nothing like the extent of the Pantani, and four good walkers who did not mind wet and dirt could, I should say, easily work the practicable portions of the marsh in a winter's day.

Our Syracusan zoological parties began to drop in after two or three days, and brought off many bats and lizards and snakes; of the former I should say that we had, one morning, at least five hundred brought on board alive, in a tall basket. I put on a glove, pulled them out by handfuls, and found that the prevalent species was *Vespertilio schreibersi*; the three or four European *Rhinolophi* were also common, but (according to the collectors) frequent a cave or caves apart from *V. schreibersi*; only one *V. murinus* appeared, and a stray *V. kuhli* or two; and I think one *V. megapodius* completes the list of species. I selected a fair series of each species, and threw the remainder up into the air from the yacht's deck. Some flew on board the vessels in harbour, particularly into the paddle-boxes of the war-steamer 'Tripoli,' whose Captain told me he was afraid that when he went to sea his paddles would destroy the nests of these bats!

During our stay at Syracuse the spring migrants were arriving in great numbers, the most conspicuous being Little Kestrels (*Falco cenchris*), Hoopoes (*Upupa epops*), Alpine Swifts (*Cypselus melba*), common Swifts (*Cypselus apus*), and immense flocks of Yellow Wagtails (*Budytes flavus*, Linn.); with these last were a few of the Black-headed Wagtail (*B. melanocephalus*), which I am more than ever inclined to consider a good species.

A good spot for bird-collecting is the marshy ground about the saltworks on the western side of the bay, to the south of the Anapo; here we obtained many specimens of the Little Ringed Plover (*Ægialitis minor*), Wood-Sandpiper (*Totanus glareola*), Red-throated Pipit (*Anthus cervinus*), and other birds. We were induced by the report of the arrival of Quails to make one or two expeditions in search of them; but we only found a few scattered birds, which had wintered in the country, and are known as "Paesane." Here I may observe that I have often been surprised to see the occurrence of Quails in England and other parts of Europe during the winter months recorded in the Natural-History columns of the 'Field' and other publications as a remarkable fact, whilst from my own experience I have noticed that wherever there is a considerable arrival of Quails on their spring migration, some, and in certain cases a good number, will remain through the winter. This is certainly the case on my own property near Preston, in Lancashire, in parts of the Cambridgeshire and Norfolk fen-country, in Spain, Italy, Tunis, and Epirus, as also in many parts of Ireland.

To return to Sicily, there is a good Snipe-marsh some seven or eight miles off beyond the Scala Grecca, between the road to Catania and the sea; but, as I have before said, these birds were becoming very scarce, and we shot but few of them. I could not discover that any of the natives were acquainted with the Hemipode (*Turnix sylvatica*), though specimens are in the Gabinetto of Syracuse, with a local name, and in some of the southern portions of Sicily it is more common than in any other part of Europe. I was much amused one evening by watching the arrival of countless thousands of Spanish Sparrows (*Passer salicicola*) to roost in a thick grove of young orange-trees, not far from the Roman amphitheatre; they came dropping in, in flights of from a dozen to perhaps two or three hundred, from all points of the compass, and made a most deafening uproar, which was at once quelled for perhaps half a minute by the crack of our driver's whip, and by the sudden dash of a Sparrow-Hawk into the midst of them; I could not see with what result. This species and the Rock-

Sparrow (*Pyrgita petronia*) were the only Sparrows we met with in Sicily.

We remained weather-bound at Syracuse till April 16th, when we sailed for Malta, where we arrived about 3 P.M. on the 17th, seeing a good many migrating birds on our way, viz. one Roller, many House-Swallows, Yellow Wagtails, Turtle Doves (one of which rested on board for some hours), common Cranes, common Herons, and a few Little Egrets. At Malta, where we remained till May 7th, I had the great pleasure of making the acquaintance of a frequent contributor to 'The Ibis,' Mr. C. A. Wright, with whom I had several most interesting zoological conversations, and in whose company I visited the very curious ruins in Gozo.

Malta, though it affords apparently few attractions to an ornithologist, is by no means in reality a barren field for him, as Mr. Wright has abundantly proved. Almost every unhappy tired straggler from the vast flocks of migratory birds that seeks a temporary resting-place under British protection, is immediately shot or bullied to death, and comes eventually into the market. The only birds I saw at liberty in one or two excursions in Malta, and on the occasion of our visit to Gozo, were one Osprey, a Marsh-Harrier, a few Collared Flycatchers, Black-headed Warblers, Short-toed Larks, common Buntings, House-Swallows, Swifts, Herring-Gulls (one adult), Lesser Black-backed Gull, and many Shearwaters. I may, however, mention that my excursions were very few, as I was kept to my vessel by a fresh attack of gout, during which I received every courtesy and attention possible from all my acquaintances and official friends in Malta. I was fortunate enough to be able to visit Mr. Wright's collection, one of the most interesting local museums I ever saw: almost every rare specimen has a history; and the owner has such a pleasant way of imparting his varied stores of information on his favourite subjects, that a visit to his collection is a real zoological recreation. He, Mr. Wright, has given us such full details of the ornithology of Malta in this Journal, that I will only say that I saw his specimens of *Falco eleanoræ, Actiturus bartramius,* the new European Chat *Saxicola leucopyga,* and many other species. From the market I obtained common Hobby, Orange-legged Falcon, Little Kestrel, Scops Owl, Common Cuckoo (some of this species in the red plumage), Bee-eater, Common Nightjar, Rock-Thrush, Russet Wheatear, and a few other common birds. The Quails were dropping in, but I did not hear of any very remarkable arrival during our stay, though I believe the vernal migration of this species was this year very exceptionally abundant throughout the south of Europe. A considerable number of Solitary Snipes (*Gallinago major*) were shot in Malta during our stay; and I heard from a Neapolitan friend that he had killed many more than usual of this species in May in the marshes near Pæstum.

We left Malta Harbour about mid-day, May 7th, for Palermo, and carried a fine ten-knot breeze from the eastward till after dark, when we were off the Sicilian coast, between Alicata and Girgenti. The wind then suddenly flew round to W.N.W., and freshened into a gale, against which we beat for some hours, without making much way; so, about 3 A.M. on the morning of May 8th, we made up our minds to try the other way round, and ran along in smooth water under the Sicilian land, till sunset left us becalmed off Taormina. We made but little way through the night, but got a light air soon after daybreak, which took us up abreast of Messina, whither we sent a boat for provisions, and lay off and on, waiting for the flying squadron under Admiral Randolph, who left Malta a few hours after us, and had kindly promised to give us a tow in case of need. The ships came up under easy steam about 3 P.M.; and the 'Topaze' towed us out through the Straits, and cast us off at 6 P.M. We found a heavy swell and hardly any wind outside, and passed a very uncomfortable night. At daylight we were off Volcano, one of the Lipari Islands, with the squadron hull down ahead of us. We at last got a fair breeze, about noon; and the squadron having stopped steaming and made sail, we overhauled them about 4 P.M., ran between their lines, and got into Palermo about 9 P.M.; very dark and torrents of rain. We remained at Palermo till May 15th. The weather during our stay being generally squally, wet, and cold, we could not do much; but I visited the University Museum, and made the acquaintance of Professor Doderlein, who gave me a great deal of interesting ornithological information. The local collections are very interesting; and here I had the pleasure of seeing three fine adult specimens of *Larus audouini,* all killed near Palermo, and four genuine Sicilian specimens of my retiring friend the Francolin, killed at various times, but all before 1870.

Professor Doderlein had lately returned from a visit to the Island of Pantellaria, where he found *Sylvia sarda* in great abundance. I believe, from information obtained from the Professor, that Sicily is certainly the headquarters of the Hemipode (*Turnix sylvatica*) in Europe, as he told me, and states in his recently published work on the ornithology of Sicily, that he had often shot from ten to fifteen specimens in one day in the neighbourhood of Alicata, Girgenti, and Sciacca. I certainly never heard of a similar abundance in any part of Spain.

We left Palermo May 15th, and had a rough and baffling passage to Cagliari, where we arrived on the morning of May 18th. A great many birds visited us on the 17th. At one time on that day we had a Woodchat (*Lanius rufus*), a Swift (*Cypselus apus*), a Wheatear (*Saxicola œnanthe*), a Wood-Warbler (*Phyllopneuste sibilatrix*), several Garden-Warblers (*Sylvia hortensis*), a Redstart (*Ruticilla phœnicura*), a few Turtle Doves, one Martin (*Hirundo urbica*) and some dozen Swallows (*Hirundo rustica*), all on board together. The Doves were decidedly the most weary of the party. I examined the Swallows very closely in hopes of finding *Hirundo rufula,* but without success, which I do not regret, as my feelings would have been very mixed between the wish to preserve a rare bird and the cruel want of hospitality to a tired and defenceless traveller, who claimed British protection on the high seas.

Cagliari, a place dear to my memory from the excellent sport I have enjoyed in its immediate neighbourhood, looked much as it did in 1862, on the occasion of my last visit to Sardinia, in spite of the talk one hears in Italy about the progress and increasing civilization of the island, the accomplished fact of a railroad, &c. Our good friends the Sards seemed to us very much in the same state as twelve years ago; and I was glad to find their extreme civility and hospitality unchanged. It was refreshing to be able to walk about the town and drive into the country unmolested, after our experience of the ruffianly swarms of rapacious beggars of Naples, and more especially of Messina and Catania, and without any fear of the brigands who infest the western parts of Sicily. I have found the Sards of all classes most courteous to strangers, and experienced hospitality from them not surpassed even in the wilder portions of beloved Spain. Of course our first visit was to the Great Stagno or Lagoon, just to the westward of the town. The water was very low, and we could not get far in the yacht's cutter; so with some difficulty we landed on the large island nearest to the town, shot a few birds, and saw a good many others—Marsh-Harriers in great abundance, Kestrels, Rose-breasted Shrike, Hoopoe, many of the commoner Hirundines, abundance of Warblers (*Sylvia melanocephala, S. cinerea, S. cisticola, Philomela luscinia, S. subalpina*), Calandra and Short-toed Larks, Stonechat, Common Bunting, Turtle Dove, Thick-knee, some small Waders which we could not distinguish, Common Quails, Coots (*Larus leucophæus*), Sandwich Terns, and a few young Cormorants (*Phalacrocorax carbo*). I met at the passage into the Stagno from the sea an old friend, one Antonio Fanni, who had been my guide in my shooting-expeditions on many former occasions; and we arranged with him to take us into the heart of the lagoons the next day. We were delayed by visitors in the morning; and it blew so hard that we could do but little. We went right away to the far north-west corner of the lagoon, and for some distance up a very birdy river. We got quite close to a Black Vulture, who was busily engaged on a dead horse. I gave him both barrels at some fifteen yards; but he seemed rather to take my salute as a compliment, and I only got a cloud of feathers in my face for my pains; and unsavoury feathers they were. We saw a solitary Flamingo, Purple Heron, Squacco Heron, a good many common Wild Ducks (*Anas boschas*), and some Red-crested Pochards (*Branta rufina*), besides the species enumerated above, also many Hooded Crows (*Corvus cornix*), of which bird we found several nests in the low tamarisks by the river-side; one of these nests contained two callow young, which we carried off, and one of which is, at the time of writing this, in the Regent's Park Zoological Gardens. On the 22nd May Antonio took me to some flat islets in a different part of the stagno, on which we found common Terns (*Sterna fluviatilis*) breeding in great numbers, and collected many of their eggs. The Sandwich Tern (*Sterna cantiaca*) and Little Tern (*Sterna minuta*) were quite as abundant as the first-named species; but we only found one nest of *S. minuta,* and none of *Sterna cantiaca.* A great number of Ducks (*Anas boschas*) breed in these islets; and we found many of their nests with eggs, and in two instances young birds which had just left the shell. We found also one nest of *Ægialitis cantiana,* several recently hatched Coots, and common Waterhens (*Gallinula chloropus*), saw Osprey, a large Falcon, and a great number of Red-crested Pochards, which were in large flocks, and apparently had not commenced nesting. I secured beautiful specimens of the three species of *Sterna* above mentioned, a pair of Kentish Plovers, and two very fine adult Herring-Gulls (*Larus leucophæus*), but did not succeed in bagging the only individual of *Hydrochelidon fissipes* which we met with; nor could I get a shot at the Red-crested Pochards, which appeared wary to an extent uncommon even in their wide-awake family. The nests of Kentish Plover and Little Tern were out on the green scum weed which covers the semiliquid mud round these islets, whilst those of the common Tern were on *terra firma* on bare spots amongst the scrubby vegetation with which they are thickly overgrown. We saw one Flamingo only, probably the same individual before observed.

We sailed for Port Mahon on the 23rd of May, but met a very strong head wind and heavy sea, so ran back and anchored again in the north-west corner of the Bay of Cagliari, where we rolled heavily all night, and sailed at daybreak on the 24th, with light puffs of wind from all quarters, and a beautiful bright sunny morning. On rounding Cape Spartivento we met a fresh contrary breeze, so ran in and anchored in smooth water close to the Isola Rossa, in the Bay of Teulada, where we found a Neapolitan brigantine weather-bound, full of passengers for Bona and Algiers. About the island, which is perhaps barely a mile in circumference, and overgrown with thick scrub, except on the north-eastern side, where it is precipitous, we noticed a great number of Shags (*Carbo desmaresti*), a Falcon, some Kestrels, myriads of Alpine and common Swifts, and a good many Rock-Doves; but it was Sunday, and we waited anxiously for morning. During the night I heard strange moaning sounds from the rocky end of the island, which I was inclined to think proceeded from seals; but I afterwards found that they were caused by the conversation of Shearwaters (*Puffinus cinereus*), of which birds we had seen many as we came round from Cagliari, but none in the immediate vicinity of the island. The next morning we were astir at daybreak, got our anchor; and whilst the yacht stood off and on, the doctor and I went off in the cutter to explore the island. We landed the doctor and one of the crew; and I cruised round under the rocks in the boat. The sea was positively alive with Shags, old and young; but I did not observe a single specimen of the Cormorant, which is common and breeds near Cagliari. Every now and then a small party of Rock-Doves would dash past us, or out of some crevice in the rocks, and give me a real sporting shot. The Shags, many of which were unable to fly, gave us some long chases; but though I might have shot a great number, and did bag as many specimens as I required, we could not succeed in hunting down a young one alive. We saw a few still in their nests; but although two of our crew managed to get within a few feet of them, they could not get quite at them, and the youngsters refused to move. In the crevices of the rocks on the north side of the island a vast quantity of Alpine Swifts were breeding, in company with many of the common species. I discovered a nest of the Rock-Martin attached to a flat face of rock, some thirty feet above the water. I secured the male bird, but, as I could not get the nest without destroying it and its contents, I left the hen bird sitting upon it in peace. A few pairs of Herring-Gulls sailed high above us in circles, barking and screaming; a pair of Blue Rock-Thrushes had their nest in a quiet creek on the eastern side; and we saw a few common Kestrels, one of which I brought down, as he gave me a snap shot, fondly hoping that he was *Falco eleanoræ,* as he looked so dark in the early sunlight. The doctor shot a very young specimen of *Falco barbarus,* and a few Rock-Doves, and found one rotten egg of Shag, and another of Herring-Gull in the same condition. The man who accompanied him about the island told me that he saw a very few small dark-coloured birds about the scrubby bushes, probably *Pyrophthalma melanocephala,* possibly *Sylvia sarda,* but they did not bag one.

We went off to the yacht about 8 A.M., and stood away for Port Mahon; but as on rounding Cape Teulada we met light head breezes, we bore away for the Island of Vacca, which lies a few miles to the south-east of Cape Sperone, and upon which my friend Mr. Basil Brooke had met with *Falco eleanoræ* in large numbers in May 1873. This island is perhaps something less than a mile in circumference, more or less precipitous all round—though accessible in a few spots on the eastern side in calm weather, rising to a high point at its southern extremity—and composed, according to La Marmora (Voyage en Sardaigne, troisième partie, Descr. géologique, tome i. p. 537), of a volcanic conglomerate, very much fretted and weather-worn, particularly at the southern end, where the cliff overhangs a shallow cave of considerable height, with an irregular perpendicular fissure. Having but little wind, we did not get within a mile of the island till about 4 P.M., when we brought the yacht up, head to windward, and went off in the cutter to explore the eastern side. Long before we went off I had distinctly made out *Falco eleanoræ* in large numbers, many Gulls, Rock-Doves, Swifts, and

Shags, the latter birds forming a sort of fringe to the little rock called Vitello (the calf), some hundred yards to the north-east of Vacca, and connected with it by a reef of rocks just awash, with two or three channels through them practicable for a boat. We landed the doctor and one of our boat's crew in a cleft of the eastern side, which extends at a very acute angle from the sea to the summit. We soon bagged four specimens of *Falco eleanoræ,* which, though they flew high, were not particularly wary. I very much regret that, owing to our feeble climbing-power, we lost three or four more of this beautiful and singular species. Several of the Greater Shearwater were caught on their single egg, under the masses of débris in the aforesaid cleft; and I had some fun with the Rock-Doves, of which we saw great numbers. The common Swifts also were breeding in force amongst the low rocks at the north-eastern end; and Herring-Gulls and Shags innumerable enlivened the scene, which, in spite of the black and weird appearance of the island, was, as will be readily imagined, one of intense interest to an ornithologist. Dusk came on; and we went off to the yacht delighted with our success, and hoping for more. A large seal (*Phoca monacha*) showed his smooth shining head once or twice, at a safe distance; it is not impossible he may have recognized the white ensign from a previous acquaintance with Lord Nelson and his squadron, as the Bay of Palmas (or San Antioco), hard by, was one of our admiral's favourite anchorages.

The wind being still ahead for Port Mahon, we ran into a sandy bay on the western side of the gulf, and anchored for the night in about ten fathoms.

We paid another morning visit to Vacca the next day, leaving the yacht about 6 A.M., and taking with us some volunteers of the crew to explore the island. We only shot one of the Falcons; but the men brought off several dozens of the eggs of the Herring-Gull (*Larus leucophæus*), and seven Cinereous Shearwaters with twelve eggs. We had seen vast numbers of this species on the water on our way to Vacca in the morning, with a good many of the smaller species, but could not succeed in bagging any of them. I shot a fine Raven (one of a pair seen); and the men brought off two young Herring-Gulls, and reported many lizards and snakes amongst the coarse grass which covers the summit of the island. An ice-plant, which I believe to be *Mesembryanthemum crystallinum*, grows in profusion amongst the rocks of Vacca, and, though highly ornamental, by no means assists the bird's-nester. The yacht ran down with a light northerly breeze, and picked us up about 9 A.M.; and away we went to the Island of Toro, some seven miles in a southerly direction. This rock is the spot upon which La Marmora found, and (I believe) first made known *Falco eleanoræ* by that name, though I have no doubt it was well known to falconers long before his time—though from its habits I consider it very doubtful that it is the species specially protected by a decree of the Pisan Duchess Eleanora, and named after her by the Sardinian general. Toro is of an entirely different geological character from Vacca. La Marmora calls it "une roche éminemment trachytique; il est totalement nu, à peine trouve-t-on de la chicorée sauvage dans ses nombreuses fissures. La roche est homogène partout, et elle ne repose pas sur le tufa; elle se décompose à l'air, et elle forme de petites grottes, dont le sol se couvre d'un sable fin feldspathique." The author just quoted gives the rock an extreme altitude of 200 metres, and a nautical mile in circumference. The landing is much more difficult than on Vacca, and the ascent from the sea much more steep, though, owing to numerous ledges and the absence of ice-plant, perhaps not so risky. Here we found the *Falco eleaonræ* in very large numbers, and easier to shoot than on the island first explored.

It is of course impossible to form any thing approaching to an accurate computation of the numbers of any species on the wing; but we agreed that whilst on Vacca there were about sixty or eighty pairs of these Falcons, on Toro there must have been at least three hundred pairs.

A good many Herring-Gulls were nesting about the summit; and my men, some of whom landed, brought off two young birds in the down. As we lay close off the rocks in the boats, watching for shots at the Falcons, I suddenly heard behind me the cry of a Gull quite new to me, turned sharp round at the sound; the bird was rather high up, but I knocked him down; he fell on the rocks close to us, but I could not see him as he lay. One of the men jumped out and picked him up; and judge of my joy, ye Ibises, when I found that he was a beautiful adult *Larus audouini* (male), in full breeding-plumage!

We had noticed that a small colony of Gulls seemed to have established itself upon the slope of the rock on the eastern side, apart from the main establishment about the summit and western portion; but as their general appearance was very like that of the Herring-Gull (at a distance), I had not paid any particular attention to them. Now, however, when they took wing at my shot, I noticed that their wings seemed much longer, and now and then the brilliant red bills and dark-coloured legs were conspicuous. I landed one of my men, with particular instructions to search the spot where we had seen these Gulls; and he very soon came down to the boat with six eggs, varying a good deal in markings, and like those of *Larus leucophæus,* but just the size I wished. I had particularly told the finder to bring any of the Herring-Gull's eggs; but he assured me that he found none, though he searched for a considerable time.

The six eggs above mentioned were in five nests, one of which contained two and the others one respectively. There were several empty nests, but no young birds visible.

In the meantime the parent birds had gone right off to sea in a body of perhaps twenty or thirty, and were coming back to see what we were about, but so cautiously and at such a height that though I fired several shots I could not manage to bring down another specimen. The rest of the men, who had landed and clambered up to the top, reported great numbers of nests, eggs, and young of Herring-Gull; but I had told them not to rob them, as we had such a series from Vacca. It was very evident, and a curious fact, that the Audouin's Gulls had their establishment entirely apart from their congeners; and certainly they are naturally much more wary.

We saw no species of Gull but the two above mentioned, no Rock-Doves, no Swifts, and very few Shags. We were so eager about the Gulls that we neglected the Falcons; and I only bagged one, a very fine old bird in the sooty plumage. A pair of quite unmistakable *Falco barbarus* had their nest in a cleft of rock near the summit of the island, and flew round, screaming loudly. The contrast between the flight, cry, and habits of the Barbary and Eleanora Falcons was very interesting. The former is a true Peregrine, a very typical representative of the genus *Falco*, darting high round the rocks like an arrow with an angry chide, and occasionally making a fierce stoop at one of the other species, as if annoyed by their abundance and apparently purposeless wavering flight. We remained about this part of Sardinia till the morning of May 30th, and paid other visits to Vacca and Toro, obtaining two more specimens of Audouin's Gull, with five more eggs, all hard sat and very difficult to blow.

We secured altogether fifteen specimens of *Falco eleanoræ* (the greater number of which were males) in all their various stages of plumage. I consider these Falcons eminently crepuscular. They have all the wing-power of their near relation the Common Hobby, though in spite of the wonderful ease and rapidity of their evolutions there is, to the eye of a falconer, something soft and unfalconlike in their habits and general appearance, their very full, dark, liquid eye (so different from the piercing optics of *F. peregrinus*), their weak legs and claws, and their extravagantly long wings and tails. With one exception, the crops of all of them contained nothing but insects; and it is worthy of note that whilst the crops of the dark-plumaged birds were crammed with very small black beetles, which swarm upon Vacca, the lighter-plumaged birds appeared to feed more upon dipterous insects, grasshoppers, dragonflies, and, in several instances, small crustaceans. I am no entomologist, and may be mistaken in my definition of these little animals; but, speaking ignorantly, I should say the Falcons feed, or at all events were feeding when we shot them, almost exclusively upon beetles, dragonflies, grasshoppers, and shrimps. In one specimen only did we find a leg of some small bird, apparently a Wheatear. When I first saw these Hawks flying in and out of the rocks on Vacca, and continually uttering their feeble cry, I imagined we were going to reap a rich harvest of their eggs; but I can state positively that at the time of our visit they had not begun to lay; and from information given me by some Neapolitan and Genoese coral-fishers of Carlo Forte, who are in the habit of landing on Toro and Vacca to dry their nets and harry the Gulls' nests, I am of opinion that August and September are their breeding-months. I believe that Lindermayer and Dr. Krüper found this to be the case in the Cyclades; and I am strengthened in my opinion by having some years ago received two young of the species in question alive from Mogador, about the middle of October, which still retained a considerable quantity of the nestling-down. The coral-fishers aforesaid, whom we found weather-bound in the Gulf of San Antioco, assured me that September was the month when they found the young birds, and that they were excellent eating.

I may here mention that I bought a living specimen of this Falcon in July last, of Castang in Leadenhall Market, which I deposited in the Zoological Gardens, Regent's Park, where I trust it did not suffer from the late terrible explosion on the canal hard by. This bird came from Mogador; and besides that locality and Dragonera, off the coast of Majorca (mentioned by Mr. Saunders), the Cyclades, Toro, and Vacca, I am informed of another breeding-locality of this Falcon in the Mediterranean, somewhat remote from us, but by no means difficult of access.

The coral-fishers, on my landing among their boats drawn up on the sand close to our anchorage, and inquiring for birds and beasts, brought me two young Gulls alive in the down, which at once struck me as too small even for newly-hatched Herring-Gulls, of which species we had several alive on board the yacht. I asked the owner where he had found them, and he immediately replied "On Toro." "Whereabouts?" and he proceeded to describe the exact spot, not knowing that we had been there, and said that these were the

Gulls "con becco color di corallo," as I firmly believe from their cry, their way of holding themselves, and the bright pink of their bills. For the first three weeks of their life on board I had of course every opportunity of comparing them with the young *Larus leucophæus*, and on arriving in England had the pleasure of presenting them to the Zoological Society, in whose gardens I also deposited two of our Herring-Gulls from Vacca.

The general appearance of *Larus audouini* on the wing is certainly more like that of *L. leucophæus* than that of any other Gull with which I am acquainted; but the wings seem conspicuously longer, and of course at a short distance the brilliant red bill is a clear distinction. The cry is not so harsh, and more prolonged than that of the latter species.

I subjoin the measurements of a skin of one of my specimens, a male, as taken by Mr. Salvin:—♂. Total length about 20 inches; length of tarsus 2·45; bill, from gape, 3; wing, from carpus to tip, 15·75; tail 6 inches.

These islands are very interesting in many ways. My men told me that on Vacca they saw several snakes of various colours (one large black one in pursuit of the only Quail they saw there) and a great variety of lizards; but I could not inspire them with my love for the Reptilia, and the only animals of that order that they brought off to me were some dozens of *Gongylus ocellatus*. On Toro they said they met with no snakes, but vast numbers of small brilliant green lizards (probably *Lacerta viridis*), which defied their attempts to capture them. My yacht-master, who landed on Toro with a gun and scrambled up to the top, described a curious-looking bird, which he pursued for some time, and which at last beat him by flying into a cave. From his description, I imagine it must have been a Nightjar, of which species we found the wings at the water's edge on Vacca, the owner probably having been devoured by the Ravens, which had a nest close by. These black robbers also spoiled a good specimen of *Falco eleanoræ*, which fell on a ledge to which we could not get till the day after the bird was shot. We took three young Ravens from the nest, and shot both the parent birds. I saw

Aquila bonellii one day sailing high over Vacca, and in a short ramble up a little valley near our anchorage in the Gulf of San Antioco observed *Circaetus gallicus, Caccabis petrosa, Corvus corax,* and a few other common birds. On Toro my men found a few large fragments of spherical shell, rusty and weather-eaten.

After this delay we at length reached Port Mahon on the last day of May; and after a short stay there (during which I had the good fortune to capture some specimens of a new lizard on the Isla del Ayre), we made the the best of our way home *viâ* Iviza, Valencia, Barcelona, and Marseilles, at which port we arrived June 21st. At Valencia we spent a long summer day in the fragrant "dehesa," but saw no birds worthy of mention. I succeeded in bringing home alive my Gulls, as before mentioned, one of the young Ravens taken on Vacca, one young Hooded Crow from near Cagliari, a Greek Partridge (*Caccabis saxatilis*) which I bought at Syracuse, and two Blue Rock-Thrushes.

It seems to me, on reading over this paper, that I ought to apologize for the frequent use of the first person singular and plural; and any one who can and will give me a practical suggestion as to how to avoid it shall have my lasting gratitude, *quantum valeat.*

II.—*Contributions to a History of the* Accipitres. *The Genus* Glaucidium. By R. Bowdler Sharpe, F.L.S., F.Z.S., &c., of the Zoological Department, British Museum.

(Plates I., II.)

In the 'Proceedings' of the Boston Society of Natural History for 1873, Mr. Robert Ridgway gave a review of the genus *Glaucidium,* which has done more than any previous attempt to clear up this difficult genus. Having myself had occasion recently to study these birds, I found great assistance from Mr. Ridgway's paper; but differing in many points from that gentleman, I have been led to place my views before the ornithological public without delay. In the study of *Glaucidium* I have not only had the Museum collection at hand, but Mr. Salvin most kindly lent the entire series contained in the Salvin-Godman collection, probably the finest existing in any public or private museum in the world. Mr. J. H. Gurney, too, was so good as to look out a series from the Norwich Museum to examine; and to the authorities of the latter museum I return my best thanks, as well as to Mr. Dresser and other friends who have lent me specimens or otherwise assisted me in the preparation of this paper.

To facilitate comparison I propose in the following notes to consider the genus exactly in the same order as Mr. Ridgway has done—because in this way we may understand each other's position better, the difficulty consisting in the unequal character of our respective series, the one examined by me being probably better than his as regards neotropical examples, but far inferior to his in those from Northern America. Mr. Ridgway's synopsis includes eight species with two "varieties," viz.:—1. *G. passerinum* cum (*a*) var. *passerinum* et (*b*) var. *californicum*; 2. *G. pumilum*; 3. *G. lansbergi*; 4. *G. jardinii*; 5. *G. ferrugineum*; 6. *G. infuscatum* cum (*a*) var. *infuscatum* et (*b*) var. *gnoma*; 7. *G. nanum*; and 8. *G. siju*. The principal character which divides these species is considered to be the markings of the crown, whether dots or longitudinal streaks. This is a tolerably good character; but it is open to an objection which I do not think Mr. Ridgway has fully appreciated—relating to the sequence of the plumages assumed by maturing birds, and also to the rufous colour exhibited by individuals of certain species. Only in one species, *G. pumilum*, does Mr. Ridgway give characters of the young bird; but, from the remarks there made, I am inclined to believe that he will coincide with me in my conviction, that, whether the adult birds have dotted or striped heads, the young of most species have a nearly uniform crown, with only a few hair-like lines on the forehead. From an examination of nestling or quite young birds, I believe that the uniform crown in the young is characteristic of the following species:—1. *Glaucidium passerinum*; 2. *G. gnoma*; 3. *G.*

pumilum; 4. *G. griseiceps*; 5. *G. nanum*; and in some of the ferruginous birds, of which more hereafter.

None of the above-named species, so far as I know, has any rufous phase; and it therefore becomes necessary to consider very carefully whether there is such a thing as a "normal plumage" and a "rufescent plumage" in *any* species of *Glaucidium*. If there is, it is curious that some species should have it and some not. Nor are we justified in attaching too much importance to the analogy afforded by *Scops*; for with this genus *Glaucidium* has little affinity, while its close ally, *Athene*, does not offer any very distinctive phases. But after a long study I have come to the conclusion, that in certain species a rufous phase *does* exist, while in others it does *not*. Von Pelzeln and Sclater and Salvin seem to have recognized this fact in their recently published works. The five species before mentioned do not, so far as I can learn, ever have a rufous phase: the females are rather browner, and sometimes become rufous-brown; but ferruginous specimens never occur. Four species of Mr. Ridgway's remain, viz.:—6. *Glaucidium jardinii*; 7. *G. lansbergi*; 8. *G. ferrugineum*; 9. *G. infuscatum*, α var. *infuscatum*, β var. *gnoma*. He treats these all as distinct, allowing two phases only to the bird he calls *G. ferrugineum*. Messrs. Sclater and Salvin joined them all together as one bird; but Mr. Salvin having now a larger series of the New-Granadan form, recognizes *G. jardinii* as distinct. I cannot allow Mr. Ridgway's *G. ferrugineum* to rank as a species; for his series appears to me to consist of the rufous phases of the birds he calls *G. infuscatum* and *G. gnoma*, and, once allowing that *Glaucidium* has a rufous phase in any of its representatives, there is no difficulty in believing that *G. lansbergi* is the rufous phase of *G. jardinii*. I recognize the following species instead of those admitted by Mr. Ridgway:—1. *G. passerinum*; 2. *G. gnoma* (*californicum*, Ridgw.); 3. *G. griseiceps*, sp. n.; 4. *G. pumilum*; 5. *G. nanum*; 6. *G. jardinii*; 7. *G. ferox* (*infuscatum* et *ferrugineum*, pt., Ridgw.), with two subspecies, 8. *G. phalænoides* and 9. *G. ridgwayi*, nob. (*ferrugineum* et *gnoma*, pt., Ridgw.), and 10. *G. sigu*. The reasons for the change in nomenclature are given in fuller detail below.

To consider, therefore, the species in the above order, we commence with the European bird, of which I have a good series before me. The species calls for little remark, as Mr. Ridgway's characters define it thoroughly: those here given by me are merely for comparison with the others mentioned in this paper. It is, however, very distinct, and is only here introduced on account of the affinity recognized by Mr. Ridgway between it and his *G. californicum.*

GLAUCIDIUM PASSERINUM.

Characters of the species.—Female decidedly larger than the *male,* and generally more umber-brown, but ultimately becoming grey on the back, like the latter. *Back* thickly mottled with buffy white bars. *Upper tail-coverts* only slightly rufescent, or darker than the back, but mottled in the same way. *Tail* regularly banded, the white bars narrow, the interspaces umber-brown, more or less inclining to blackish; white bands on tail, *six* in the female, *seven* in the male, the bars sometimes not strictly conterminous. *Head* always spotted in the adult bird. *Sides of upper breast* strongly banded with white.

Young with uniform head. The full-grown young much browner than the adult, the spots on the crown scanty.

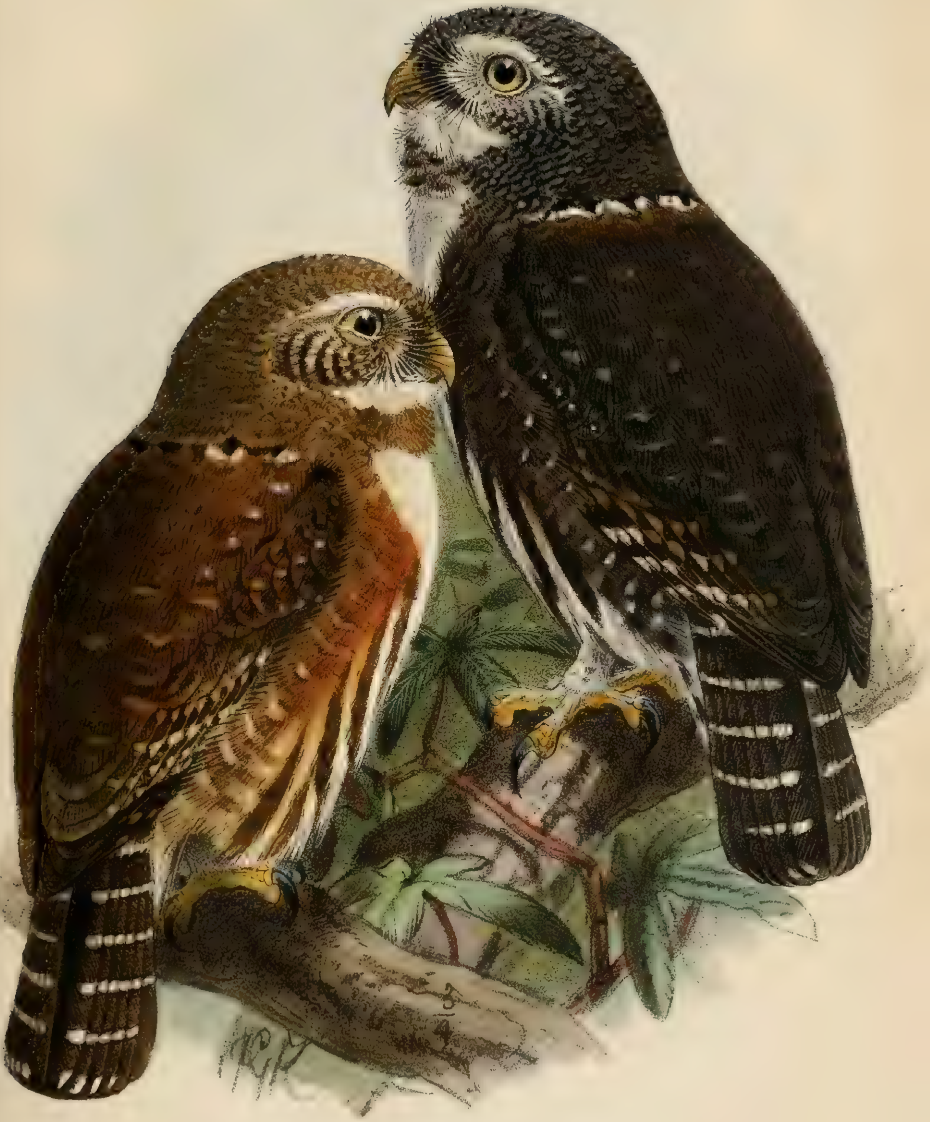
	Total length.	Wing.	Tail.	Tarsus.
a, ♂ *ad.* Falun, S. Sweden	6·2	3·85	2·6	0·6
b, ♀ *ad.* Stockholm	6·8	4·15	2·8	0·65
c, [♂] *juv.*[*] Gardsjö, Sweden (*Wheelw.*)	6·2	4·1	2·7	0·65
d, ad. S. Ural (*Strader*)	6·2	3·8	2·6	0·6

GLAUCIDIUM GNOMA.

Characters of the species.—Back greyish, profusely mottled with spots and bars of ochraceous white. *Upper tail-coverts* not rufescent, uniform with back, and mottled in exactly the same manner. *Tail* not transversely banded, but crossed with seven rows of white spots, inclining to half-bands on the inner web. *Head* distinctly spotted all over with white or ochra-

---

[*] Though marked a male by the late Mr. Wheelwright, the measurements indicate that it is a female, the sex being further shown by its brown plumage.



J.G.Keulemans. lith.

M & N. Hanhart, imp.

GLAUCIDIUM GNOMA.

AMERICAN MUSEUM
CENTRAL PARK,
NEW YORK.
OF NATURAL HISTORY.

ceous white, as well as a few bars of the latter colour. *Sides of upper breast* clear brown, thickly mottled with spots and bars of ochraceous buff. A *rufous collar* round the hind neck.

This species I believe I understand, from the series examined, which is nearly as good as Mr. Ridgway's. I do not consider it so close to *G. passerinum* as the latter gentleman does, and find its nearest ally in *G. griseiceps* of Central America, and *G. pumilum* of Brazil. To the latter species it is closely allied, and, like it, has a rufous collaret round the hind neck, below the usual whitish nape-band; but it is distinguished, when adult, by the spotted character of the upper surface, whereas *G. pumilum* seems to have the back uniform at all ages. The tails of the two species are also different, the spots in *G. pumilum* never exceeding four or five, and being much smaller and more rounded. When adult, also, the northern bird has much whiter legs than its Brazilian congener.

	Total length.	Wing.	Tail.	Tarsus.
a, ♂ *imm.* Vancouver Island (*Lord*) . .	6·5	3·5	2·75	0·7
b, *ad.* „ „ (*Hepburn*)	7·0	3·6	2·75	0·8
c, *imm.* N. California (*Brydges*)	7·0	3·5	2·7	0·7
d, ♀ *ad.* Mexico (*Le Strange*)	6·0	3·5	2·7	0·65
e, *imm.* „ „	6·0	3·3	2·4	0·7
f, *juv.* W. Mexico (*Mus. Brit.*)	5·8	3·6	2·55	0·7
g. *imm.* Guatemala (*Skinner*)	6·5		2·6	0·7
h. Choctum (*O. Salvin*)	6·5	3·35	2·55	0·75
i. „ „	6·0	3·35	2·5	0·7
k. „ „	6·5	3·6	2·65	0·75

Mr. Ridgway says:—"This species is not at all like *gnoma* (*i. e.* his *gnoma*), nor, indeed, any other American species with which it has been confounded by nearly all ornithologists —even by Cabanis," &c. &c. In reply to this I must state my conviction that Cabanis and the other ornithologists were *right* in identifying this bird as *Glaucidium gnoma*; and I almost suspect that our author did not consult the original description of Wagler in the 'Isis.' Had he done so, I do not think he could have hesitated to recognize in his *G. californicum* the true *G. gnoma*. I transcribe from Wagler's description the following characters, which, to my mind, identify the bird intended:—"Pileus, dorsum, tergum, tectrices alarum superiores ac plumæ scapulares *cinereo-fuscescentia, albo punctato-guttata*: maculæ hæc *guttiformes* in capite pone obscuræ marginatæ; rectrices cinereo-nigricantes, subtus pallidiores, *fasciolis 7 candidis*; *collare nuchæ obsoletum rufescens*." The italics are mine; but I maintain that the nature of the spots, which are stated to be rounded and margined with dusky, the seven spots on the tail, and the rufous collar sufficiently point to the bird which Mr. Ridgway calls *G. californicum*. There is no mention of a striped head to bring the bird within the second section of Mr. Ridgway's synopsis; but its position is distinctly indicated by the nature of the crown-spots, which are said to be "guttiformes."

GLAUCIDIUM PUMILUM.

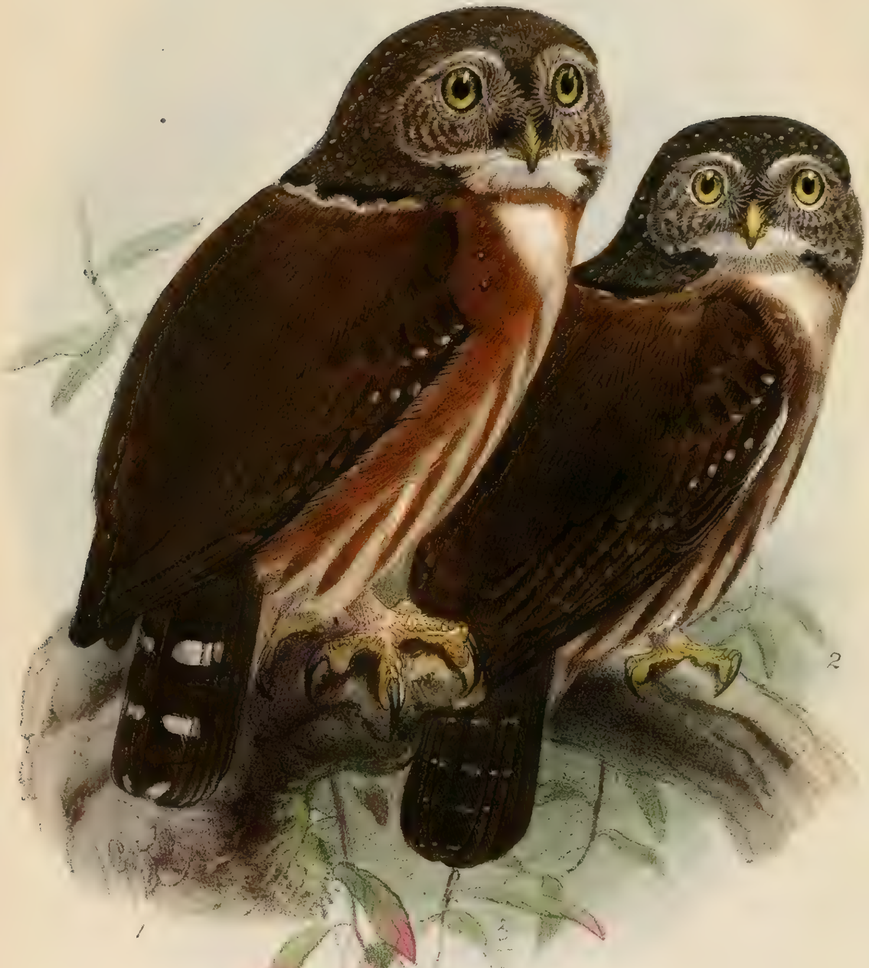
Characters of the species.—I have not seen any specimens in which the sex has been determined; but there seems to be very little difference in the sexes. *Back* uniform, with no whitish mottlings. *Upper tail-coverts* uniform with the back. *Tail* not banded, but having four or five rows of rounded white spots, including the terminal one. *Head* minutely dotted with white. *Sides of upper breast* clear rufous, with a few whitish dots. *Rufous collar* round hind neck.

Young. Similar to the adult, but more *chocolate*-brown, the dots on the head nearly obsolete, the crown being therefore more *uniform*.

	Total length.	Wing.	Tail.	Tarsus.
a, juv. Brazil (*Mus. Brit.*)	5·8	3·5	2·15	0·75
b, ad. S. America (*Mus. Brit.*)	6·0	3·5	2·2	0·7
c, ad. " "	6·3	3·3	2·2	0·7
d, ad. Bahia (*Wucherer*)	5·5	3·5	2·2	0·7
e, ad. " "	5·8	3·5	2·2	0·7
f, juv. " "	5·5	3·55	2·25	0·75

I believe this species to be confined to Brazil, and not to range, as Mr. Ridgway supposes, into Central America, where its place is taken by the next bird. Consequently the two

AMERICAN MUSEUM
CENTRAL PARK,
NEW YORK.
OF NATURAL HISTORY.



J. G. Keulemans, lith.

M & N Hanhart, imp.

1. GLAUCIDIUM PUMILUM.
2. GLAUCIDIUM GRISEICEPS.

specimens from Guatemala in Mr. Ridgway's paper (p. 98) are *G. griseiceps* and not *G. pumilum.*

GLAUCIDIUM GRISEICEPS, sp. n.

Characters of the species.—Back uniform, with no whitish mottlings. *Upper tail-coverts* uniform with back, but having slight indications of fulvous mottlings. *Tail* not banded, but having from five to six rows of small white spots, inclining to bands on the inner web. *Head* minutely dotted with buffy white. *Sides of upper breast* rufous-brown, with very distinct white spots. Slight rufous collar round hind neck.

Young. Head uniform grey, with a few fulvous streaks on the forehead: tail blackish, with five rows of small ochraceous spots.

	Total length.	Wing.	Tail.	Tarsus.
a, juv. Veragua (*Arcè*)	5·6	3·4	2·25	0·7
b, ad. Guatemala	5·6	3·55	2·4	0·7
c, ad. Chisec, Guatemala (*O. Salvin*) ..	5·5	3·4	2·35	0·7
d, ad. Choctum (*O. Salvin*)	5·5	3·4	2·3	0·7
e, ad. „ „	5·5	3·45	2·25	0·7
f, ad. „ „	5·3	3·45	2·2	0·7
g, ♂ ad. „ „	3·5	3·45	2·3	0·7

This new species is allied to *G. pumilum,* and has been identified with that species by Mr. Ridgway and others, but it differs in several characters: the tail-bands are five or six, the head at all ages greyish, contrasting forcibly with the back, and the rufous collar is often obsolete or absent; the tail, instead of having large round spots, has white markings of small size and rather inclining to bars; the whole tone of the plumage is more umber and not so rufous as the Brazilian bird; and this is especially true of the under surface, where the sides of the breast are conspicuously spotted with white.

This bird represents *G. pumilum* and *G. gnoma* in Central America, and is intermediate between the two species; but there can be no doubt that it is specifically distinct from both.

GLAUCIDIUM NANUM.

Characters of the species.—Female of decidedly larger bulk than the *male,* and rather browner. *Back* everywhere mottled with fulvous spots. *Upper tail-coverts* more rufous than the back, but mottled with fulvous like the latter. *Tail* regularly and completely banded with rufous and dark brown, with a slight tip of white. Rufous *bands on tail** ten in the male, eleven in some females, but ten also in this sex sometimes; all the bands regular and completely traversing the tail-feathers, the rufous ones narrower than the brown interspaces. *Head* striped or spotted with rufous-buff, as the case may be. *Sides of upper breast* strongly mottled with whitish spots or bars.

Young. Head nearly uniform ashy brown, scantily *streaked* with ochraceous buff. *Tail* as in adult. *Under surface* more clouded with ashy brown than in the old bird. The *sides of the breast* streaked and spotted with rufous buff.

I do not see any difficulty in understanding the sequence of plumage in this species, which appears to be an orthodox *Glaucidium,* like *G. passerinum.* The tail is marked alike at all ages, just as in *G. passerinum*; but the head is uniform greyish brown in the young (one of Mr. Salvin's specimens has not yet got its full-grown tail), with a few streaks on the crown, which are much more strongly developed in the rufous-brown plumage, which I take to be the next stage towards maturity; and, lastly, these streaks dilate into spots, which are characteristic of the adult stage. As a rule, the rufous tail-bands are narrower than the dark brown ones; but in the typical example, and in another from South America, in the British Museum, they are about equal in breadth. Mr. Ridgway will see that the fact I have mentioned about this species having both a dotted and a striped head, militates against his primary division.

	Total length.	Wing.	Tail.	Tarsus.
1. ♀ *ad.* Rio Negro (*Hudson*)	8·6	4·4	3·2	0·95
2. ♂ *ad.* " "	7·5	3·95	3·0	0·85
3. ♂ *ad.* Santiago, Chili (*P. & L.*)	7·3	3·95	3·0	0·85
4. ♀ *ad.* " " "	8·5	4·45	3·4	0·9

---

* In enumerating these, the base of the feather, which is always light, is *not* counted, but the terminal or subterminal band is included.

	Total length.	Wing.	Tail.	Tarsus.
5. S. America	8·0	3·85	2·9	0·9
6. *juv.* S. America	7·5	3·9	2·9	0·85
7. Straits of Magellan (*King*)	7·0	3·85	2·9	0·9
8. ♀ *ad.* Prov. Colchagua	7·5	4·0	3·1	0·95

We have now remaining five of Mr. Ridgway's species, as follows:—6. *Glaucidium lansbergi*; 7. *G. jardinii*; 8. *G. ferrugineum*; 9. *G. infuscatum*, cum (*a*) var. *infuscatum*, et (*b*) var. *gnoma*; 10. *G. siju*. Of the bird which he calls *G. lansbergi*, I have seen a good many examples. They all come from Columbia and Venezuela; and I think Mr. Ridgway did right to quote "Brazil" as a habitat with some hesitation.

I have already noted that I consider *G. langsbergi* and *G. jardinii* to be the brown and rufous phases of one and the same species, and consequently unite them under the name of *G. jardinii*. Mr. Ridgway considers that they are specifically distinct, and identifies the brown-plumaged bird as the original *G. jardinii*. Here, again, he cannot have consulted the 'Comptes Rendus,' or has mistranslated Bonaparte; for the description points to the rufous bird and not to the brown one:—

"*Rufo-chocolatina maculis rufis*; subtùs rufescens in pectore obscurior, fascia gulari et subalari fusca; remigibus rectricibusque *nigro rufoque fasciatis*, maculis fascialibus magnis."

The italics are here again my own; but the description clearly indicates which bird was intended.

GLAUCIDIUM JARDINII.

Characters of the species.—Back blackish brown, plentifully varied with spots and bars of ochraceous. *Upper tail-coverts* uniform with the back and spotted in the same manner. *Tail* deep black, with six rows of white spots (counting the terminal one), not continuous nor approaching near the shaft. *Head* rather more ashy brown, with large dots of white. *Sides of upper breast* very dark brown mottled with large fulvous spots and bars.

Young birds are much more chocolate-brown than the adults, and much less mottled on the back, the head being nearly uniform, with a few very narrow shaft-lines of fulvous. The second plumage (or perhaps the adult female) is also rufous-chocolate, mottled all over with fulvous bars, which are also distributed over the crown, where many of them are bleached whitish. The old bird has a spotted head, the dots becoming rounder and smaller with age.

	Total length.	Wing.	Tail.	Tarsus.
a, ad. Antioquia, New Granada (*Salmon*)	6·5	3·9	2·9	0·7
b, ad. New Granada (*Mus. Norv.*)	6·5	3·95	2·8	0·7
c, ad. Bogota (*Mus. S. & G.*)	6·7	4·25	2·8	0·85
d, juv. ,, ,, ...	6·0	3·8	2·7	0·8
e, juv. ,, (*Mus. Brit.*)	5·7	4·1	2·6	0·75
f, ad. ,, ,, ...	6·0	4·15	2·75	0·7
g, ad. ,, ,, ...	6·0	4·0	2·6	0·7
h, ad. ,, (*Mus. Norv.*)	6·5	4·1	2·7	0·8
i, ad. ,, ,, ...	6·5	4·3	2·7	0·85
k, ad. Columbia ,, ...	6·4	3·9	2·8	0·75
l, ad. ,, (*Mus. Brit.*)	6·2	3·95	2·8	0·75
m, juv. ,, ,, ...	6·5	4·0	2·8	0·8

Rufous phase.—*Back* ferruginous, with numerous fulvescent transverse bars more or less concealed. *Upper tail-coverts* exactly similar to the back, and barred in the same manner. *Tail* ferruginous, with black cross bands, seven in number, but of irregular width and not strictly conterminous. *Head* rather darker ferruginous than the back, mottled all over with rufous spots or bars. *Sides of upper breast* bright ferruginous, with narrow blackish bars and spots, causing a distinctly mottled appearance. *Under surface of body* bright ferruginous, streaked with rufous or rufous-brown, only slightly varied with white on the lower breast.

Young.—Head uniform brown, rather darker than the rest of the upper surface, which, however, is brownish; the tail cinnamon, with blackish bars, all of which are more or less broken up and connected by a mesial juncture along the shaft.

	Total length.	Wing.	Tail.	Tarsus.
a, ad. Bogota (*Mus. S. & G.*)	6·0	3·9	2·6	0·8
b, imm. ,, ,, ...	6·3	3·85	2·7	0·75

	Total length.	Wing.	Tail.	Tarsus.
c, ad. „ (*Mus. Norv.*)	6·0	4·0	2·6	0·75
d, ad. „ (*Mus. Brit.*)	6·0	3·9	2·55	
e, imm. New Granada (*Mus. Norv.*)	6·0	4·3	2·6	0·8
f, imm. Columbia (*Mus. Norv.*)	6·4	4·0	2·7	0·8
g, imm. Venezuela (*Goering*)	7·0	4·1	3·0	0·8

The characters of this species are well given by Mr. Ridgway; but he does not notice one which appears to obtain in all the brown-plumaged birds, viz. the continuance of the black nape-patches in an extended line, so as to form a distinct black collaret. In both the brown and rufous phases the young bird differs in being more uniform above; but there is no species so distinctly mottled on the upper surface when adult. In Mr. Salvin's collection is a bird which, from its browner plumage, is probably the adult female, answering to this plumage in *G. gnoma* and *G. nanum.* The rufous phases of *G. jardinii* and *G. ferox* are very distinct, and ought not to be confounded; for whereas in the latter the back is nearly uniform, in the former it is very distinctly mottled with bars of clearer rufous: the under surface also is ochraceous, without any white beyond the chin and gular patch, and is streaked with rufous instead of white.

Laying aside the question of the Cuban *G. siju,* I find myself now confronted by a long array of specimens which, according to Mr. Ridgway's synopsis, must belong to two species, viz.:—either *Glaucidium ferrugineum,* with a "normal" or a "rufescent" plumage; or *Glaucidium infuscatum,* which includes two "varieties" (the true *G. infuscatum,* and a smaller representative form, *G. gnoma*). I can scarcely suppose that I shall induce Mr. Ridgway to change the mode of nomenclature which has now taken such hold on American ornithologists; but I much prefer to speak of "races" or "subspecies" instead of "varieties," a *variety* of a bird being surely one which exhibits white feathers or some such *lusus naturæ.*

In the consideration of these two species I propose to examine the series at my disposal according to locality, endeavouring to identify the species by the light of Mr. Ridgway's paper. I regret that I have no specimens from the southern portion of North America, several having fallen under Mr. Ridgway's notice from those parts.

Mexico. I have nine specimens of *Glaucidium* from this country, all with striped heads; and Mr. Ridgway's synopsis will not quite account for all the differences which I see before me. For instance, *G. ferrugineum* is said to have the tail "dark brown, crossed by 7–9 continuous bands of bright rufous, about the same width as the brown ones;" but of all the nine birds there are only three which have a tail answering to this description, and yet they must all be *G. ferrugineum*; for not one has the tail of *G. infuscatum*, "dark brown, crossed by 6–7 non-continuous bands of white, narrower than the dark ones." To tabulate the characters of my Mexican examples:—

	Tail.	Number of bands.	Colour of bands.	Remarks.
a. Orizaba (*Mus. Norv.*)	rufous.	10	light brown.	Bands narrower than rufous interspace and indistinct.
b. Cordova (*Sallè*)	"	8	"	Ditto, ditto.
c. W. Mexico (*Mus. Brit.*)....	"	9	brown.	Bands only a little narrower than interspaces, but more distinct.
d, ♀. Mexico (*Le Strange*)	"	8	"	Bands distinct and regular, but not so broad as interspaces.
e. Orizaba (*Mus. S. & G.*)	"	9	light brown.	The basal bands narrow, but the rest about as broad as interspaces.
f. Mexico (*Le Strange*)	brown.	8	bleached rufous.	Bands about equal in width to interspaces.
g. W. Mexico (*Mus. Brit.*)....	dark brown.	9	bright rufous.	The rufous bands rather narrower than the interspaces, and not continuous.
h, ♂. Mexico (*Le Strange*)	"	8	rufous.	The bands not continuous, much narrower than interspaces, which are washed with brown: terminal bands whitish externally.
i, ♂. Cordova (*Sallé*)	blackish.	8	pale rufous or whitish.	Bands not continuous and much narrower than interspaces: many of the bands whitish, with slight rufous tinge.

I think that any one will see a connexion between the rufous-tailed specimens *inter se*, and again with the black-tailed ones; and I believe that they must all be referred to one species; indeed, I do not see how any one can get away from the fact that Mr. Ridgway is right in supposing that two distinct phases are present in the bird he calls *G. ferrugineum.* The rufous on the tails would prevent any of our present series from belonging to *G. gnoma*; and yet a great step towards the latter is made by the blackish-tailed specimen, where the rufous bands shade into white on their outer web. The black-tailed birds are likewise males and more grey than the rufous-tailed examples, which are generally of a more rufous shade altogether.

I give the measurements of a few specimens from each locality:—

	Total length.	Wing.	Tail.	Tarsus.
a, ad. W. Mexico (*Mus. Brit.*)	7·0	3·9	2·6	0·85
b, ♂ *ad.* Cordova (*Sallè*)	6·5	3·7	2·7	0·75
c, ♀ *ad.* ,, ,,	6·5	3·8	2·85	0·8
d, ad. Orizaba (*Mus. S. & G.*)	6·5	3·65	2·7	0·75
e, ad. Mexico (*Le Strange*)	6·3	3·7	2·7	0·85
f, ♀ *ad.* ,, ,,	6·5	3·75	2·7	0·85
g, ♂ *ad.* ,, ,,	6·5	3·65	2·7	0·85

Guatemala. A large series has been lent me by Mr. Salvin, which repeat to a great extent the characters of the Mexican series, as can be seen by the following tabulation [see p. 48].

The rufous-tailed specimens are also more rufous in general coloration; those with the white tinge to the rufous bars are more umber-brown, while those with the white spots (= *G. gnoma*, of Ridgway) are much greyer.

Besides the specimens above mentioned, Mr. Salvin has four birds which exhibit a somewhat remarkable plumage, being almost uniform rufous, with the exception of a few nearly obsolete bars and spots of brighter rufous on the head; and these markings exist only in two out of the four examples. The primary quills and tail-feathers, however, are very different from those of *G. ferrugineum,* having no complete bars, but are blackish brown, with a more or less distinct rufous

	Tail.	Number of bands.	Colour of bands.	Remarks.
a, ad. Guatemala (*Mus. Brit.*)	rufous.	9	brown.	Bands about equal to interspaces, narrower near the bases.
b, ad. Dueñas (*O. Salvin*)	,,	9	light brown.	Bands equal to interspaces.
c, ad. ,, ,, ...	deep rufous.	8	brown.	Bands about equal to, or a little broader than, interspaces.
d, ad. El Paraiso (*O. Salvin*) ..	rufous.	9	light brown.	Bands indistinct and narrower than interspaces.
e, ad. ,, ,, ..	,,	10	,,	Almost obsolete and much narrower than interspaces.
f, ad. S. Geronimo (*O. Salvin*)	rufous.	10	,,	Bands about equal to interspaces.
g, ad. ,, ,,	,,	9	,,	Ditto ditto.
h, ♂ *ad.* Volcan de Agua (*O. Salvin*)	,,	9	brown.	Bands about equal to interspaces near tip, narrower and imperfect near base of feathers.
i, ad. Guatemala (*Van Patten*)	,,	9	,,	Bands about equal to interspaces.
k, ad. Dueñas (*O. Salvin*)	,,	9	dark brown.	Bands equal to interspaces.
l, ♀ *ad.* Laguna (*O. Salvin*) ..	brownish	8	pure white.	Doubtless *G. gnoma* of Ridgway.
m. Guatemala (*Van Patten*) ..	dark brown.	8	white washed with rufous.	Interspaces washed with rufous and broader than crossbands.

shade, and with a few ochraceous spots, larger and more inclining to bars on two of the feathers. In the absence of any indication by Mr. Ridgway of the young bird of his *G. ferrugineum,* I must suppose these birds to be the immature of that species; and thus we should have the very young birds with uniform upper surface, the head gradually becoming mottled and spotted and then getting striped in the adult. I am confirmed in this sequence by the presence of several spots, more or less dilated, among the stripes on the crowns of the adults.

	Total length.	Wing.	Tail.	Tarsus.
a, ad. Laguna (*O. Salvin*)	6·5	3·9	2·7	0·85
b, ad. El Paraiso ,, ...	6·5	4·1	2·7	0·8
c, ad. ,, ,, ...	7·0	3·9	2·75	0·8

	Total length.	Wing.	Tail.	Tarsus.
d, ad. Dueñas ,, ...	6·5	3·55	2·6	0·8
e, ♀ *juv.* Coban ,, ...	6·0	3·7	2·5	0·8
f, juv. ,, ,, ...	6·0	3·5	2·6	0·75
g, juv. Volcan de Fuego (*O. Salvin*)....	6·5	3·55	2·75	0·75
ad. Guatemala (*Van Patten*)..........	6·5	3·85	2·8	0·85

Costa Rica. Quite recently Mr. Whitely, of Woolwich, brought me six specimens which came out of a collection made in Costa Rica, four of them being ferruginous birds with rufous tails, clearly belonging to *G. ferrugineum*, while one should be referred to Ridgway's *G. gnoma*. The latter specimen has very evident remains of rufous on the white bars, and is approached by another specimen of more general chocolate-brown shade, the tail deep rufous brown, inclining more or less to blackish, and barred with white, all the bars more or less shaded with rufous. The head has less distinct stripes, and seems to indicate that the bird is a younger male.

In addition to Mr. Whitely's series, the Museum possesses another Costa-Rican specimen, which has a rufous-brown tail crossed with eight bands of pale rufous bleached nearly white on the centre tail-feathers. In the collection of Messrs. Salvin and Godman is a bird obtained by Carmiol in 1869, which closely approaches the cinnamon-coloured specimens from Brazil, and has, like them, a nearly uniform tail. Two of Mr. Whitely's examples, however, so closely approach this bird, that I think it is only an extremely rufous specimen of the northern bird, as it still carries remains of bars on the tail.

	Total length.	Wing.	Tail.	Tarsus.
a, ad. Costa Rica (*Mus. Brit.*)	6·5	3·8	2·85	0·7
b, ad. ,, ,, ...	6·5	3·75	2·8	0·7
c, ad. ,, ,, ...	6·5	3·85	2·8	0·75
d, ad. ,, ,, ...	6·5		2·7	0·75
e, ad. ,, ,, ...	6·5	3·85	2·7	0·8
f, ad. (*rufous*). Costa Rica (*Carmiol*) ..	7·5	3·9	2·6	0·75

Veragua. Messrs. Salvin and Godman possess two specimens from Santa Fé and Calobre, collected by Arcé. They are both rather dull rufous, with ferruginous tail crossed with seven bands of brown, and agree fairly with the Guatemalan examples in the collection of the above gentlemen. The Museum has one bird, collected by Arcé, from this country and belonging to the small grey form called *G. gnoma* by Ridgway; the tail is blackish with six rows of white spots.

	Total length.	Wing.	Tail.	Tarsus.
a, ad. Veragua (*Arcè*)	6·0	3·6	2·7	0·8
b, ad. Calobre „	6·5	3·6	2·6	0·75
c, ad. Santa Fé „	5·5	3·75	2·55	0·8

Venezuela. From this country Bonaparte named his *G. lansberi*, a MS. name attached to a specimen in the Leiden Museum, and adopted by Mr. Ridgway for the rufous phase of *G. jardinii*. The specimen which was the type of Bonaparte's name, is no doubt No. 1 of Schlegel's 'Catalogue' (p. 31): "mâle, Caracas, présenté par Mr. van Lansbergen;" so that if the species were to stand, it would probably have to be called *Glaucidium lansbergeni**.

Schlegel, moreover, unhesitatingly unites it to *G. ferrugineum* of Brazil; and as the Venezuelan birds which I have examined are undoubtedly the same as the red Brazilian birds, I fancy that Dr. Wilson must have made a mistake in identifying the Philadelphia specimen described by Mr. Ridgway. A male bird from Caracas, in the Salvin-Godman collection, is deep ferruginous, the tail rather duller and without bars, though faint indications of the latter can be seen on holding the tail away from the light. But at the same time a Venezuelan specimen of *G. jardinii* in the rufous phase (= *G. lansbergi* of Ridgway) is in the Museum, so that both species perhaps occur. The Norwich Museum also contains a ferruginous specimen from Caracas.

	Total length.	Wing.	Tail.	Tarsus.
a, ♂ ad. Caracas (*Mus. S. & G.*)	7·0	3·6	2·65	8·8

Trinidad. I have seen five specimens from this island—four in the Museum collection, and one in that of Messrs. Salvin and Godman. Both brown and ferruginous birds occur, the latter not being very different from Central-American examples. A young specimen is in the Museum, which is different from the Guatemalan specimens mentioned above. It has a perfectly uniform earthy-brown head, deep rufous-chestnut back, and uniform deep rufous tail. The Trinidad birds are certainly rather more chestnut than the majority of Central-American specimens; but I cannot find any good specific characters, so content myself with calling it a distinct race, not exactly agreeing with either Brazilian or Central-American specimens, and for which the name *G. phalænoides* may be retained, as, notwithstanding the statement in Daudin's description (perhaps accidental) that the bill is blackish, the characters given are otherwise so complete as to leave no doubt of the species intended.

---

* More recently, however, Schlegel (Mus. P. B. Columbæ, p. 139) has named a Dove (*Peristera lansbergi*) after the same gentleman, whom he now calls M. le Gouverneur van Lansbergen.

	Total length.	Wing.	Tail.	Tarsus.
a, ad. Trinidad (*Mus. Brit.*)	6·5	3·9	2·65	0·75
b, ad. „ „	6·5	4·1	2·55	0·75
c, ad. „ „	6·5	4·0	2·65	0·75
d, juv. „ „	6·0	3·75	2·55	0·75

New Granada. Four specimens from Santa Marta are before me; one, from the Norwich Museum, is cinnamon, with striped head, and indications of eight narrow and nearly obsolete bars on the tail. The three others are in the British Museum, and were purchased from one and the same collection. One is nearly uniform cinnamon above, with only a few light stripes on the head: the others are ochraceous brown, the back spotted with fulvous, the head of one striped, and that of the other partly striped and partly spotted, the spots dilating into stripes. The tail in both is nearly the same, dark brown, with eight bands of white, not continuous across the shaft, but all with more or less of a rufous tinge.

	Total length.	Wing.	Tail.	Tarsus.
a, ad. Santa Marta (*Mus. Brit.*)	7·0	3·65	2·6	0·7
b, ad. „ „	7·5	4·0	2·85	0·8

Ecuador. The two specimens collected by Fraser, and recorded by Mr. Sclater (P. Z. S. 1860, p. 289), are in the series lent me by Mr. Salvin: one is a cinnamon bird with striped head, and has a few longitudinal markings remaining on the tail; the other is a female of the ochraceous-brown form, the spots being very distinct on the whole of the upper surface, thus agreeing with the specimen mentioned by Mr. Ridgway (p. 103).

	Total length.	Wing.	Tail.	Tarsus.
a, ♀ *ad.* Babahoyo (*Fraser*)	7·0	3·95	2·8	0·8
b, ♂ *ad.* ,, ,, ...	7·0	3·7	2·7	0·8

Amazonia. Messrs. Salvin and Godman own a specimen from the "Amazon," obtained from the Maison Verreaux. It is difficult to know what country would be intended by a French agent by such a locality; but the bird is one of the immature ferruginous Owls with uniform tail and clouded brown head, very similar to the young Trinidad specimen before noticed.

Brazil. From this rather comprehensive locality I have a large series representing three forms, viz. the true grey-plumaged *G. infuscatum* of Ridgway and authors, the real *G. ferrugineum* of Prince Max., with uniform cinnamon tail, of which Mr. Ridgway seems only to have seen one specimen (p. 101), and, lastly, the ochraceous brown form with white-spotted tail, like the Santa-Marta specimens above mentioned. From Bahia the Museum has both forms, rufous and grey, collected by the late Dr. Wucherer. Only two specimens of the ferruginous form have any traces of bars on the tail.

Brown phase.

	Total length.	Wing.	Tail.	Tarsus.
a, *ad.* Brazil (*Mus. S. & G.*)	8·5	3·95	3·2	0·8
b, *ad.* ,, ,, ...	7·5	4·0	3·3	0·85
c, *ad.* ,, ,, ...	8·0	4·3	3·2	0·8
d, *ad.* Bahia (*Wucherer*)	7·0	3·7	2·9	0·8
e, *ad.* ,, ,, ...	7·0	3·9	2·9	0·85
f, *ad.* Cajutuba (*Natterer*)............	6·5	3·8	2·6	0·75
Rufous phase.				
a, *ad.* Novo Friborgo (*Youds*)	8·0	4·1	3·1	0·9
b, ♀ *ad.* Brazil (*Claussen*)	9·0	4·6	3·5	0·9
c, ♂ *ad.* ,, ,, ...	8·0	4·2	2·9	0·85
d, *juv.* ,, (*Mus. S. & G.*)	7·5	4·15	3·1	0·8
e, *ad.* Bahia (*Wucherer*)..............	6·5	3·7	2·7	0·8

Peru. Messrs. Salvin and Godman have a female from Arequipa, obtained by Mr. H. Whitely, and representing the true *G. infuscatum,* and also a ferruginous specimen from Lima, having a uniform tail, like the Brazilian examples.

	Total length.	Wing.	Tail.	Tarsus.
a, ♀ *ad.* Arequipa (*Whitely*)	7·5	4·0	3·2	0·85
b, *ad.* Lima (*Nation*)	7·0	3·9	2·9	0·8

Bolivia. Two specimens from this country, collected by Mr. Brydges, are preserved in the British Museum, one being greyish brown, of the ordinary *G. infuscatum* type, and the other ochraceous brown, spotted on the back like the Ecuador bird noticed above: the latter has a striped head; but the greyish bird has the crown partly spotted and partly streaked.

	Total length.	Wing.	Tail.	Tarsus.
a, *ad.* Bolivia (*Brydges*)..............	6·5	3·75	2·6	0·75

The conclusion forced upon me after an examination of the foregoing series is, that Mr. Ridgway is right in believing in a northern and a southern form of *Glaucidium infuscatum,* but his *G. ferrugineum* must be regarded as the rufous phase of these grey-plumaged birds. The ranges of these two birds are not so easily made out; but I fancy, from the series before me, that the small form extends from the Southern States of North America throughout Mexico and the whole of Central America to Panama; and thence, from Venezuela and New Granada southwards throughout Amazonia to Brazil, Peru, and Bolivia, it is replaced by the larger form.

The differences between these two species it is not easy to define. The large bird from Brazil differs chiefly in size and in having more distinct spots on the crown, back, and sides of the breast, so that I cannot understand Mr. Ridgway stating that the latter parts are "not speckled." The northern form is smaller, and, as Mr. Ridgway states, is "greyish umber," instead of being "dark sepia-brown;" the spots on the back are obsolete or concealed; and the spots on the tail are only six in number, instead of seven as in the larger form.

Between the browner phases of the two species there is also a decided difference*. The South-American species, again, exhibits a strongly spotted back and scapulars, and is much more ochraceous brown than the Central-American one: the head is generally more spotted; and the tail is more simple in marking, being dark brown or rufous brown, with seven or eight clearly defined rows of white rounded spots or bars. The Central-American bird, on the other hand, is generally deeper-coloured, or, as Mr. Ridgway calls it, of a "reddish umber," with scarcely any indication of dorsal spots, the tail-band regular, and the crossbands either rufous, or, where inclining to white, the latter always bears a trace of rufous, as if the white spots were gradually developed out of a previous rufous bar.

The ferruginous plumages of these two birds are more distinct than the brown ones, the Brazilian birds being generally of a clear cinnamon tint, with uniform tail of the same colour, whereas the Central-American bird is of a deeper and more ferruginous colour, always more or less distinctly barred with brown. I do not deny that specimens occur in both countries approaching the characters of both species; but, as a rule, the birds may be distinguished without much difficulty.

The result of my studies of these birds may be shortly summed up as follows:—

1. That the birds called by Mr. Ridgway *G. ferrugineum*, *G. infuscatum*, and *G. gnoma* constitute one species, widespread and very variable, ranging from the southern provinces of North America southwards over the entire continent as far as Brazil, Paraguay, Bolivia, and Peru. The correct name of this bird seems to be *Glaucidium ferox* (V.).

2. That the Brazilian bird is the larger, has more white spots on the tail, and has a cinnamon phase with uniform tail.

3. That from Panama northwards this larger form is repre-

---

* Scarcely any of the specimens in South-American collections have the sexes marked; but I fancy the browner-plumaged birds are either females or young males; the darker the tail and the whiter the spots on it, the greyer the bird.

sented by a smaller representative, very similar in colour in the brown phase, but having one row of spots less on the tail, and having a ferruginous phase of plumage with regularly banded tail.

4. That, although at the extreme limits of their range these two birds are tolerably well characterized, in the lower part of Central America, and even in Brazil, occur specimens which it would be difficult to refer with certainty to either one or the other form.

5. That, viewing the differences which are exhibited by most specimens from the northern and southern ranges of the birds, it is convenient to keep them separate; and as Mr. Ridgway has incorrectly called the Central-American bird *G. gnoma*, the latter will require a new title, which I propose shall be *Glaucidium ridgwayi*.

6. That the Trinidad birds hold a somewhat intermediate position, having only six bars on the tail in the grey phase, and thus resembling the Central-American bird, but being altogether of a darker and more sepia-brown, with a dotted crown. The latter character, as I have shown, does not go for much; and the ferruginous specimens have more or less striped heads. One of the latter is younger, and has a rufous tail irregularly marked with blackish, the bars, as far as they can be counted, being eight in number. I do not attach great importance to this supposed subspecies from Trinidad, as, after all, the Central-American bird may range along Venezuela to Trinidad; but at present there is no connexion between the two birds by means of specimens of *G. ridgwayi* from any part of Venezuela. The average measurements of the three races are as follows:—

	Total length.	Wing.	Tail.	Tarsus.
1. *G. ferox*	6·5–9·0	3·6 –4·6	2·6 –3·5	0·7–0·9
2. *G. ridgwayi*	5·5–7·0	3·55–4·1	2·5 –2·85	0·7–0·85
3. *G. phalænoides*	6·0–8·0	3·75–4·1	2·55–2·65	0·75

These dimensions are sufficient to show that measurements are little worth in the consideration of *Glaucidium*, although, were the sexes of the specimens known, there can be no doubt that some of the great differences in size in each of the species might be accounted for by a difference of sex.

The following is therefore my proposed arrangement of the American species of *Glaucidium* with reference to Mr. Ridgway's paper on the genus:—

1. GLAUCIDIUM GNOMA. Californian Owlet.

Glaucidium passerinum, var. *californicum,* Ridgway, Pr. Bost. Soc. xvi. p. 94 (1873).

Hab. Western Region of North America from Vancouver Island, southwards through Central America to Guatemala.

List of Specimens examined.

E Mus. Brit.—a, ♂ juv. Vancouver Island (*J. K. Lord*). *b.* Mexico. *c.* Central America.

E Mus. Salvin and Godman.—a, b, ad. Choctum, Vera Paz, Guatemala, Jan. 1860 (*O. Salvin*). *c, ad.* Choctum, Jan. 1862 (*O. Salvin*).

E Mus. Norv.—a, pull. Orizaba, Mexico (*Botteri*). *b.* Guatemala. *c.* Guatemala (*Skinner*). *d.* Northern California (*Brydges*).

E Mus. H. S. Le Strange.—a, ♀ ad., b, juv. City of Mexico (*H. S. Le Strange*).

E Mus. H. E. Dresser.—a, ad. Vancouver's Island, Nov. 16th, 1867 (*J. Hepburn*).

2. GLAUCIDIUM GRISEICEPS, sp. n. Isthmian Owlet.

Glaucidium pumilum (pt.), Ridgway, *l. c.* p. 97.

Hab. Central America from Guatemala to Veragua.

List of Specimens examined.

E Mus. Brit.—a, ad. Guatemala. *b, juv.* Veragua (*Arcé*).

E Mus. Salvin and Godman.—a, b, c, d. Choctum, Vera Paz, Guatemala (*O. Salvin*). *e.* Chisec (*O. Salvin*).

3. GLAUCIDIUM PUMILUM. Brazilian Owlet.

Glaucidium pumilum, Ridgw. *l. c.* p. 97.

Hab. Brazil.

List of Specimens examined.

E Mus. Brit.—a, b. South America. *c, d.* Brazil. *e.* Brazil (*Claussen*). *f, g.* Bahia (*Wucherer*).

E Mus. Salvin and Godman.—a. Brazil. *b.* Bahia (*Wucherer*).

E Mus. Norv.—a, ad. Brazil.

4. GLAUCIDIUM NANUM. Patagonian Owlet.

Glaucidium nanum, Ridgway, *l. c.* p. 104.

Hab. South America: Chili and Patagonia as far north as the Rio Negro.

List of Specimens examined.

E Mus. Brit.—a, b. S. America. *c.* Straits of Magellan. *d.* Port Famine (*King*). *e,* ♀ *ad.* Province of Colchagua, July 1870 (*Reed*). *f,* ♂ *ad.* Rio Negro, Patagonia, May 1871 (*Hudson*).

E Mus. Norv.—a, ♀ *ad.* Chili (*Verreaux*). *b, juv.* Chili.

E Mus. Salvin and Godman.—a, b, ♂ ♀ *ad.* Province of Santiago, Chili (*Philippi and Landbeck*). *c,* ♂ *pull.* Santiago, Chili (*P. & L.*). *d,* ♀ *ad.* Rio Negro, Patagonia (*Hudson*).

5. GLAUCIDIUM JARDINII. Jardine's Owlet.

Glaucidium jardinii et *G. lansbergi,* Ridgw. *l. c.* pp. 98, 99.

Hab. South America: New Granada and Venezuela.

List of Specimens examined.

E Mus. Brit.—a, b, ad. Columbia. *c, juv.* Columbia. *d, e, ad.* Bogota. *f, juv.* Bogota. *g, juv.* Sierra Nevada, Venezuela.

E Mus. Salvin and Godman.—a, b, ad., c, d, juv. Bogotá. *e, ad.* Antioquia, New Granada (*Salmon*).

E Mus. Norv.—a, juv. New Granada. *b, ad.* New Granada. *c, ad.* Columbia. *d, juv.* Columbia. *e, f, g.* Bogotá (*E. Mark*).

6. GLAUCIDIUM FEROX. Azara's Owlet.

Glaucidium infuscatum, Ridgw. *l. c.* p. 102.

Glaucidium ferrugineum (pt.), id. *l. c.* p. 100.

Hab. South America: the whole of Brazil, Bolivia, and Peru, extending along the western coast through Ecuador to New Granada and Venezuela.

List of Specimens examined.

E Mus. Brit.—a, ♀ *ad.* Brazil (*Such*). *b,* ♂ *ad. c, juv.*

Brazil (*Claussen*). *d, ad.* Brazil. *e, f, ad.* Bahia (*Wucherer*). *g, h, ad.* Bolivia (*Brydges*). *i, k, l, ad.* Santa Marta.

E Mus. Norv.—*a* (brown phase), *ad.* Brazil. *b* (rufous phase), Brazil. *c.* Santa Marta (*Verreaux*). *d.* Caracas (*Verreaux*).

E Mus. Salvin and Godman.—Brown phase: *a, b, ad.* Brazil. *c.* Cajutaba, Brazil (*Natterer*). *d, juv.* Bahia (*Wucherer*). *e.* Venezuela. *f,* ♀ *ad.* Babahoyo, Ecuador (*Fraser*). *g,* ♀ *ad.* Arequipa, Peru (*Whitely*). Rufous phase: *a.* S. America. *b, c.* Brazil. *d.* Novo Friborgo, S.E. Brazil (*Youds*). *e.* Amazon (*Baird*). *f,* ♂ *ad.* Venezuela. *g,* ♂ *ad.* Babahoyo (*Fraser*). *h,* ♀ *ad.* Lima, Peru (*Nation*).

7. GLAUCIDIUM PHALÆNOIDES. Daudin's Owlet.

Hab. Trinidad (*Mus. Brit.*; *S. & G.*).

List of Specimens examined.

E Mus. Brit.—*a, b, c, d, ad. juv.* Trinidad.

E Mus. Salvin and Godman.—*a.* Trinidad.

8. GLAUCIDIUM RIDGWAYI. Ridgway's Owlet.

Glaucidium infuscatum, var. *gnoma,* Ridgw. *l. c.* p. 103.

Glaucidium ferrugineum (pt.), Ridgw. *l. c.* p. 101.

Hab. From the Rio Grande (perhaps the southern border of the United States, *Ridgway*) through Central America to Panama.

List of Specimens examined.

E Mus. Brit.—*a, b.* Mexico. *c.* Guatemala. *d–k.* Costa Rica. *l.* Veragua (*Arcé*).

E Mus. Salvin and Godman.—*a.* Orizaba. *b, c.* Cordova, Mexico (*Sallé*). *d, e.* Guatemala (*Van Patten*). *f.* Laguna, Guatemala, Dec. 26, 1857 (*O. Salvin*). *g, h.* San Geronimo, Nov. 1859 (*O. S.*). *i. j.* El Paraiso (*O. S.*). *k, l, m, n. ad. et juv.* Dueñas, 1861 & 1862 (*O. S.*). *o,* ♂ *ad.* Volcan de Agua, above San Diego, Nov. 1873 (*O. S.*). *p.* Volcan de Fuego, Sept. 7th, 1859 (*O. S.*). *q, r.* Coban, Vera Paz, Dec. 1861 and Feb. 1862 (*O. S.*). *s.* Costa Rica (*Carmiol*). *t,* ♂ *ad.* Santa Fé, Veragua (*Arcé*). *u,* ♂. Calobre, Veragua (*Arcé*).

E Mus. Norv.—*a, ad.* Orizaba, Mexico. *b.* Guatemala (*Skinner*).

9. Glaucidium siju. Cuban Owlet.
Glaucidium siju, Ridgw. *l. c.* p. 105.
Hab. Cuba.
E Mus. Brit.—ad. Cuba.

III.—*Three Months on the Coast of South Africa.*

By Captain G. E. Shelley, F.R.G.S.

I left England for the Cape of Good Hope the 15th December, 1873, on board the 'Asiatic,' one of the Union Company's steamships. The only land we sighted during the twenty-seven days' passage was Grand Canary, Teneriffe, and St. Helena. At the latter place we arrived on the morning of the 4th of January; and most welcome was the chance of feeling oneself again on *terra firma.* Not wishing to lose the opportunity of adding a new species to my collection, I took my gun on shore; and during the time I was visiting Napoleon's tomb and the house in which he lived at "Longwood" I shot by the way three specimens of *Ægialitis sanctæ-helenæ,* Harting, the only indigenous bird, and several of the small Ground-Dove (*Geopelia tranquilla*), introduced from Australia, and of *Estrelda astrild,* a native of the African continent, both of which species are thoroughly acclimatized to the island and are very abundant.

The steep road which leads out of the town towards Longwood threads the sides of rather a picturesque valley, with a small waterfall at the end trickling down over dark volcanic rocks. On turning out of this valley, and close to the first wayside canteen, the country opens out; and the scenery becomes very wild as the road passes into the fir-woods. Here I quitted it for a small barren plateau to the left, where I found some seven or eight specimens of *Ægialitis sanctæ-helenæ,* the "Wire-bird," the only ones I saw on the island,—a strange place for an *Ægialitis,* as there is no water near, and the rocky ground is parched and barren. All the specimens I procured were moulting.

On the 12th of January we reached Table Bay. The first sight of the Cape is really fine; the flat-topped "Table Mountain," overhanging the town, contrasts strongly with the jagged outline of the range extending to the south, the peaks of which are known as the twelve Apostles. To the west of the town the lower hills are called the "Lion," from their fancied resemblance to that beast in a crouching position; the head, pointing to the south, is formed of a barren mass of rock, while on its other extremity is the signal-station. On the eastern slope of Table Mountain is situated the town of Wynberg; and the vineyards of Constantia and many other pretty little villages lie embedded in the pine-forests which clothe the base of this remarkable mountain, while beyond the villages to the north-east the country opens out into a wide plain, only covered with stunted bush backed up in the distance by mountain-ranges. Having glanced at the nature of the country, I proceeded with my gun to make my first personal observations upon the avifauna of South Africa. What first struck me was the absence of bird- and insect-life; nor did a six weeks' knowledge of Cape Colony, from Cape Town to Worcester, alter my impressions, though sea-fowl are very abundant. At Cape Town the commonest land-birds are *Laniarius gutturalis, Lanius collaris, Drymœca maculosa, Zosterops capensis, Cossypha caffra,* and *Turtur albiventris* (frequenting the fir-woods and bushes), *Saxicola familiaris* on the more barren open ground, *Promerops caffer, Nectarinia famosa, N. chalybea,* and *N. afra* around the flowering aloes; and on the more marshy land, especially towards Salt River, *Motacilla capensis* and *Calidris arenaria* were very common. By the 20th every thing was arranged for a trip to the Knysna in a waggon drawn by eight horses, when one of my friends, Mr. Elliot, was taken suddenly ill; but thinking that a few days' rest would restore him to health, I started alone for Wellington, where three days later I heard of his death; thus my pleasure-tour received at its outset the severest of blows, the loss of a friend, and I gave up all thoughts of the Knysna.

During my tour in the colony, between Stellenbosch and the Paarl, I "outspanned" near a small pond, where flocks of *Ægialitis tricollaris* and *Tringa minuta* were very abundant; and amongst the neighbouring stunted bush there was a good variety of birds, such as *Saxicola sinuata, S. pileata,* and *Thamnobia coryphæa,* this latter species being very common; when frightened it only flies for a short distance, often avoiding further pursuit by running. Its habits reminded me of *Aedon galactodes* as I have observed them in Egypt; especially when on the ground, it has the habit of suddenly stopping and flitting up its tail as it watches an intruder, and in all its movements is very active and restless. I also saw a few specimens of *Megalophonus apiatus,* which would rise much like a Pipit, and fly for only a short distance close over the brushwood, rarely running when on the ground. Of game there was very little beyond a few small hares; and I met with one fine covey of *Francolinus afer,* of which I killed three.

The country from Capetown to Stellenbosch is flat, covered with stunted bush about two feet high, while towards the Paarl it becomes more hilly. During my stay in these parts I was much struck by the regular hours kept by the Swifts; each morning about 8 o'clock they first appeared, often in considerable numbers, retiring as suddenly again at 10. What they do with themselves during the remainder of the day I am unable to say, though probably they retire to the crevices in their mountain homes during the heat of the day to digest at leisure the breakfast they have so hurriedly partaken of. They appear again, but generally in less numbers, in the afternoon.

On the 24th I was rewarded for a hot walk up the Paarl mountain by making a fair bag of small birds and being able to observe several species which I had not previously seen. *Cossypha caffra* and *Thamnobia coryphæa* frequently flitted across the path in front, or ran beneath the low bushes, erecting and fanning out their tails at intervals, while *Laniarius gutturalis* skulked cunningly away to the thickest neighbouring shelter. *Fringillaria capensis,* another very common bird throughout the colony, might generally be seen in pairs perched upon the crest of some large mass of rock. *Saxicola familiaris* was extremely abundant and tame, running from beneath a bush, where it had taken refuge, to the summit of a prominent stone, whence it soon flitted on to another eminence, preferring rock to bush for its perch. Amongst the herbage on the top of the mountain I disturbed *Sphenœacus africanus,* which quickly took shelter in another thick tuft of grass, when it gradually crept down the stalks and disappeared, giving me some trouble in again pursuading it to show itself. Having deposited some specimens to get cool in the shade of a large rock, I had wandered a few hundred yards off, when I was recalled by the hoarse croak of *Corvultur albicollis,* which was so intently examining these specimens that it allowed me to get within range, though, as a rule, I have found it a very wary bird. On descending the mountain I enjoyed the luxury of a bath in a shallow stream in company with a pair of my old friends *Ceryle rudis,* who were constantly hovering over the water or plunging into it after small fish.

The following day I got to Wellington, where I met with a good number of *Œna capensis, Colius striatus, Pycnonotus capensis, Passer arcuatus, P. diffusus,* and *Vidua principalis.* Amongst the reeds by the river I obtained a specimen of *Laniarius gutturalis,* without any signs of a black collar, in which plumage it appears so different that at the time I did not recognize the species.

The trip over "Baines's Kloof" is through some of the finest wild mountain scenery in South Africa. The road, on descending towards Darling bridge, runs along the steep sides of a deep ravine, through which the soft green banks of a rippling brook strongly contrast with the harsh outline of the flat-topped mountains which confine the view. Of the handsome speckled Rock-Pigeon (*Stictœnas phœonotus*) we saw numbers, both feeding on the road, or dashing out from the overhanging rocks.

At Darling bridge we left the mountain-gorge for a wide elevated plain, a common feature in this part of the country; here we met with several specimens of *Francolinus capensis* (the "Pheasant" of the colonists). On first coming upon a small covey of five upon the ground amongst the low bush, their resemblance to Guineafowl was very striking, as, with necks erect, they first endeavoured to escape by running; on the wing they looked heavy, rarely sustaining their flight for more than a few hundred yards.

On this same plain, near a river, I found small birds fairly plentiful; and on entering the mountain-range near Ceres I met with a pair of *Scopus umbretta* in the stunted bush and shot one, obtaining its mate on my return visit a few days later. About here bush-buck are tolerably plentiful; and in the mountain-gorge near Ceres I saw several *Amydrus morio* (the "Redwing" of the colonists); but they were too shy to allow me to approach within shot. At Ceres I saw a few Ducks, the only ones I met with during my rambles; and these would not let me get within range. Amongst the species which I had not previously shot, I may mention *Amydrus bicolor*: its habits are very similar to those of our English Starling; and they were extremely plentiful, both in the town itself and the surrounding country. On going to bathe in the river I killed a Little Bittern (*Ardetta podiceps*) in immature plumage. On the plains around Ceres I met with the "Knorhan" (*Eupodotis afra*); and on my return journey to Capetown I added considerably to my collection of skins, but not to the number of species.

During the remainder of my stay at the Cape I devoted my attention chiefly to some flowering aloes on the sides of the Lion-hill. *Promerops caffer*, like the other Sun-birds, are much attracted by these stately flowers; and it was with no little interest that I watched these remarkable birds clinging to the blossoms. I left Capetown on the 14th of February for Natal, and was glad to get away, as it is but a poor place for the naturalist, be he in pursuit of birds, beasts, or insects, though for the botanist I believe the case is very different.

The coasting steamers stop at Mossel Bay for George and the Knysna. The country around this place is very barren, with a perfect absence of trees, but with some rather picturesque ravines. Amongst the small bushes *Promerops caffer* and *Nectarinia famosa* are very abundant, the former usually in family parties, the latter in pairs. A few miles out of the town there is a very thriving Ostrich-farm. We next stopped at Port Elizabeth, which, though by no means a promising place to look at, is fairly well stocked with birds and insects, especially along the small water-courses. Here the Cape fauna is exhibited in *Buteo jackal, Laniarius gutturalis,* and *Amydrus morio,* species which I never saw near Durban. On the 23rd of February I arrived at Port Natal, and, after wasting two days in getting my guns and ammunition through the custom-house, began work: of course days wasted, though reckoned as of little importance by others, are most grudgingly granted by the naturalist, who feels that each day lost is the loss of some species which he may never again have the chance of seeing in its native wilds. The first sight of Natal after a stay at the Cape is very cheering; the dense bush which lines the shore extends in an almost unbroken belt, some twenty miles in width, as far as Delagoa Bay eastward, while towards the Cape of Good Hope the land becomes more open as one approaches the mouth of St. John's River and East London.

Port Natal, where we disembarked, was, when I landed, literally swarming with insect life, the air being full of fine beetles and gaily coloured butterflies. Durban is situated at about three miles from the Port, on Natal Point, on the shore of the large bay, which, owing to its narrow outlet and the shallow marshy nature of some parts of the sides, has much the appearance of a salt lake, and is frequented by numerous Waders. On the other side Durban is surrounded by an open, rushy flat, bounded by a low thickly wooded range of hills, called the Berea, whence I collected a variety of birds and a great number of butterflies; unfortunately the former were rarely in good plumage at the season of my visit, though some of them were breeding at the time.

Whilst in the neighbourhood of Durban, from the 25th of February to the 13th of April, I made the following notes upon the birds I there observed. I shall add to the list those species which I met with during my stay in Cape Colony, as I have yet some few additional notes to make to the preceding rambling portion of my journal, and which may be entered shortly in the following list:—

1. Polyboroides typicus, Smith. Banded Gymnogene.

Mr. Ayres, of Pinetown, kindly gave me an immature specimen of this Hawk, and told me that it was not uncommon in that locality.

2. Circus ranivorus (Daud.). South-African Marsh-Harrier.

Very common in the marshes close to Durban. Its habits are similar to those of the common Marsh-Harrier of Europe, to which species it is very closely allied; but in no plumage does it acquire the grey on the wings and tail. The surest means of recognizing this species is by the bars on the outer primary, *C. æruginosus* not having bars on that feather. The specimens I preserved had been feeding on frogs.

3. Circus macrurus (Gmel.)*. Swainson's Harrier.

I shot an immature specimen of this species in the Cape colony near Ceres.

4. Buteo jakal (Daud.). Jackal Buzzard.

I occasionally met with this species in Cape colony and at Port Elizabeth; but near Durban it is replaced by *Lophoaetus occipitalis*, a bird of very similar appearance and of the same indolent habits.

5. Accipiter tachiro (Daud.). South-African Goshawk.

A specimen of this fine Hawk was kindly given to me by Mr. Ayres, of Pinetown, who shot it in that locality.

6. Accipiter minullus (Daud.). Little Sparrow-Hawk.

A plentiful species, frequenting the edges of the coffee- and sugar-plantations, especially those to the east of the Umgeni river. Two females which I procured measured in the flesh 10·4 and 10·2 inches. The irides, cere, and legs are yellow.

7. Lophoaetus occipitalis (Daud.). Crested Eagle.

Very abundant near Durban. It frequents the large trees at the edges of clearings, or in the more open country, rarely resorting to the thick woods. It is rather partial to habitations, where its presence is any thing but welcome, as it frequently carries off poultry, though its favourite food appears to be rats. In habits it is sluggish, sitting stationary for a long time on the same bough, only moving its head at intervals from side to side, or erecting and depressing its fine crest. When flying, the white on the under surface of the wing is very apparent. Cere and feet yellow; the irides in an adult specimen I shot were brownish yellow; in a less mature bird I killed at Pinetown, the occipital crest was faintly tipped with buff, and the irides were brown.

---

* *C. swainsoni*, Smith et auctt. rec.

8. Elanus cæruleus (Desfont.). Black-shouldered Kite.

I occasionally saw single specimens in the more open country about Durban, but did not observe it in Cape colony.

9. Baza verreauxi (Lafr.). Verreaux Kite-Falcon.

This is the most abundant species of Hawk near Durban, where it frequents the thick woods. I was, however, not fortunate enough to obtain a specimen, although I fired at three and knocked one down into the bush.

10. Tinnunculus rupicolus (Daud.). South-African Kestrel.

I shot one specimen at Pinetown while it was hovering over the grassy plain, and occasionally saw Kestrels in Cape colony, probably of this species. Its habits appeared identical with those of our common English Kestrel.

11. Aluco punctata (Licht.)*. Brown-backed Barn-Owl.

I met with one specimen to the east of the Umgeni, which rose out of the high grass while I was searching for Quail.

* [We take this opportunity of expressing our dissent from the view propounded by Professor Newton respecting the impropriety of applying the term *Strix* to the Barn-Owl (*Strix flammea*): see Yarrell, Brit. B. 4th ed. p. 194.

Brisson recognized two genera of Owls, under the names *Asio* and *Strix*. The former of these, being additional to the genera given in the 12th edition of the 'Systema Naturæ,' must be accepted, *Asio otus* being the Brissonian type of the genus. Prof. Newton truly says that *Strix aluco* is Brisson's type of the Linnæan genus *Strix* as restricted. But does the rule which admits the *additional* Brissonian genera give Brisson any right to define other Linnæan genera? We think not. If not, *Strix*, as further restricted by Savigny in 1809, may still stand for the

I also heard of a young one being brought into Pinetown for sale, from which I conclude that it is not very uncommon about Durban.

12. Caprimulgus europæus, Linn. Common Goatsucker.
I frequently met with it at Durban and Pinetown.

13. Cypselus apus (Linn.). Common Swift.
Common in Cape colony, and I occasionally saw it at Durban and Pinetown.

14. Cypselus melba (Linn.). Alpine Swift.
Although I found this species very plentiful in Cape colony, I did not observe it at Durban.

15. Cypselus caffer, Licht. South-African White-rumped Swift.
Plentiful in Cape colony; occasionally seen in considerable numbers about Pinetown. At first sight it appears very similar to the West-African *C. affinis,* from which it differs in having a deeply forked tail.

16. Hirundo rustica, Linn. Chimney-Swallow.
By far the most abundant Swallow in Capetown, and, indeed, exceedingly common wherever I went.

17. Hirundo cucullata, Bodd. Rouselline Swallow.
Very plentiful throughout Cape colony and Natal, and often seen feeding in company with the Swifts. In March and April I frequently saw it engaged in constructing its nest, which it places against walls of houses in similar positions to those chosen for that purpose by our common House-Martin. A specimen I shot measured in the flesh 7·8 inches. Beak black; irides and legs brown.

18. Psalidoprocne holomelæna (Sund.). Black Swallow.
Very plentiful about Pinetown, and occasionally met with

---

group of Owls with which by far the majority of authors, for considerably more than half a century, have associated this name. By the rules of nomenclature a portion of Brisson's genera were admitted by a special clause; why extend this author's powers beyond the wording of that clause?—Ed.]

at Durban. It is a woodland bird, usually seen in small flocks, often perching on boughs on the shady side of large trees. They appear to avoid the glare of the mid-day sun, feeding mostly in the evening, often long after sunset. Length of a specimen in the flesh 6·4 inches. Beak black; irides dark brown; legs purple-brown, shading off into flesh-colour on the back of the tarsus and on the soles of the feet.

19. COTYLE FULIGULA (Licht.). Brown Martin.

Occasionally seen whilst at Capetown, generally in the streets, where it builds under eaves of houses, even in the most crowded thoroughfares.

20. COTYLE PALUDICOLA (Vieill.). South-African Sand-Martin.

At Ceres, in Cape colony, I found this species very abundant, reminding me strongly of *C. riparia*, from which its dull-coloured breast most readily distinguishes it.

21. CORACIAS GARRULA, Linn. European Roller.

An immature specimen of this bird was brought to Mr. Ayres whilst I was at Pinetown; he told me that it was by no means common in that locality.

22. HAPALODERMA NARINA (Vieill.). South-African Trogon.

Not uncommon in the thick woods about Durban and Pinetown.

23. HALCYON ALBIVENTRIS (Scop.). Brown-hooded Kingfisher.

Very common about Durban and Pinetown; all those that I examined had been feeding upon grasshoppers.

24. CORYTHORNIS CYANOSTIGMA (Rüpp.). Malachite-crested Kingfisher.

This charming little Kingfisher is found invariably frequenting the small streams and ditches close to Durban, where, however, it is not very abundant. The only specimen I shot measured in the flesh 5·7 inches. Beak and legs brilliant coral-red, slightly shaded with black towards the nostrils and at the base of the lower mandible; irides dark brown.

25. Ispidina natalensis (Smith). Natal Kingfisher.

Rather more plentiful than the last species, and occasionally met with in the woods away from water.

26. Ceryle rudis (Linn.). Black-and-white Kingfisher.

I saw a pair at the Paarl, in Cape colony, and a single specimen near Durban.

27. Ceryle maxima, Pall. Great African Kingfisher.

I met with a pair of these gigantic Kingfishers amongst the low bushes between Durban and the Conguella, and procured them both. They kept entirely to the small streams, and when disturbed flew only for a short distance, returning again to the same haunt as soon as they fancied they were out of danger. The female measured 17·5 inches. Beak black, paler at the base of the lower mandible; legs horn- or olive-slate colour, pale above the tarsal joint, and darkest on the toes and back of the tarsus; irides dark brown. There is little if any difference in the size of the two sexes.

28. Merops apiaster, Linn. European Bee-eater.

I met with a small flock near Durban in the beginning of April.

29. Upupa minor, Shaw. South-African Hoopoe.

I did not meet with this bird alive, but saw a skin, and was told that it only came to Durban at certain seasons.

30. Irrisor erythrorhynchus (Lath.). Red-billed Irrisor.

Also migratory about Durban, where some years it appears to be tolerably common.

31. Nectarinia famosa, Linn. Malachite Sun-bird.

Common in Cape colony, and very abundant at Mossel Bay; I also met with them at Port Elizabeth. They were still in the moult up to the middle of April.

32. Nectarinia afra, Linn. Greater Double-collared Sun-bird.

Plentiful in Cape colony.

33. Nectarinia chalybea, Linn. Lesser Double-collared Sun-bird.

I met with this Sun-bird abundantly in Cape colony, at Mossel Bay, Port Elizabeth, Durban, and Pinetown.

34. Nectarinia gutturalis, Linn. Scarlet-breasted Sun-bird.

I saw a few specimens which had been shot about Durban and Pinetown; but I believe they do not come to the coast during the hot season, at which time I was there.

35. Nectarinia collaris, Vieill. Southern Collared Sun-bird.

Very plentiful about Durban and Pinetown. I was given two nestlings in the beginning of April; their breasts were yellow, without any collar, and their upper parts metallic green, as in the adult.

36. Nectarinia olivacea, Smith. Olive Sun-bird.

I shot this specie both at Durban and Pinetown, where it does not appear to be uncommon.

37. Nectarinia verreauxi (Smith). Verreaux's Sun-bird.

Not uncommon about Durban. It measures 5·2 inches. Beak and legs black; gape orange; irides dark brown.

38. Promerops caffer, Linn. Long-tailed Sun-bird.

A very local species; it is plentiful in Cape colony, and extremely common at Mossel Bay, where I usually saw it in family parties. It is a very curious and pretty sight to see a group of these birds busily hunting for insects around some flowering aloes, their long tails floating in the breeze.

39. Zosterops capensis, Sundev. Cape-White-eye.

Common in Cape colony and at Durban; in the former place I mostly met with it in the pine forests at the foot of Table Mountain. Irides brown.

40. Drymœca maculosa (Bodd.). Cape-Warbler.

Very abundant in Cape colony; but I am not aware of having seen it at Durban, where its place is occupied by *D. subruficapilla*. Length in the flesh 5 inches; legs and beak flesh-colour, the latter shading into horn-colour on the upper and tip of the under mandible; irides hazel.

41. Drymœca subruficapilla, Smith. Tawny-headed Warbler.

Very common about Durban and Pinetown, usually in family parties, where I have frequently watched them threading their way along the edge of the bushes, constantly uttering a short note.

42. Drymœca smithi, Bp. Smith's Warbler.

Not uncommon near Durban.

43. Catriscus apicalis (Licht.). Natal Fantail.

I saw several specimens of this bird in the sedge at Durban and Pinetown, where, owing to their creeping-habit and the thick vegetation they frequent, I was only able to shoot two. It is a very striking little bird as it flits out from amongst the thick rushes with a jerky flight, its heavy dark tail rather inclining downwards.

44. Sylvietta micrura, Rüpp. Short-tailed Creeper.

I believe I am not mistaken in entering this species in my present list; for although I did not bring back a specimen, I shot several. I found them common about Durban, frequenting the lower parts of the thickest bushes, peering out occasionally from between the leaves, and constantly moving and uttering a jarring note.

45. Apalis thoracica (Shaw). Bar-throated Warbler.

I met with several specimens creeping about in the stunted bushes in Cape colony while on my way to Ceres.

46. Sphenœacus africanus (Gmel.). Pointed-tailed Warbler.

I met with this species both at the Paarl, in Cape colony, and at Pinetown, near Durban. It frequents the high grass, and is difficult to drive out of the thick covert it resorts to. When on the wing it flies low with a straight and even flight. The specimen I procured at the Paarl measured 7·5 inches; legs and beak grey, the latter inclining to black towards the culmen; irides hazel.

47. Acrocephalus palustris (Bechst.). Marsh-Warbler. I shot the only specimen I saw in the thick bush some 500 yards from the marshy ground near Durban. I compared it with a European specimen in Mr. Dresser's collection, with which it entirely agrees. Length in the flesh 5·5 inches; beak flesh-colour, shading into brown on the culmen; legs flesh-colour, with a slight livid shade; irides hazel. This is no doubt the species mentioned by Mr. Gurney (Ibis, 1865, p. 266) as "*C. arundinacea* (Gmel.)?"

48. Thamnobia coryphæa (Vieill.). Coyphée Warbler. Very abundant amongst the low bush in Cape colony. In habits it is very lively, now flitting for a short distance along the path, then running fleetly through the stunted bush, stopping at intervals and erecting and expanding its tail, the white on the outer feathers contrasting well with the dark sombre hues of its general plumage. Length in the flesh 7 inches; beak and legs black; irides dark brown.

49. Saxicola familiaris, Steph. Familiar Wheatear. Very common in Cape colony. I preserved specimens from Capetown and the Paarl, while those which I procured at Stellenbosch and intermediate villages belong to the next species, which is so very similar in habits, and so closely allied that I did not recognize them apart until I returned to England. Had Mr. G. R. Gray seen these birds alive in South Africa, I think he would never have placed them in the genus *Aedon*, as their habits are very similar to those of the better-known European Chats. They frequent both the plains and the rocky mountains, rarely perching on bushes.

50. Saxicola sinuata, Sundev. Sickle-winged Chat. Common in Cape colony.

51. Saxicola pileata (Gmel.). Imitative Wheatear. I only met with this species at Stellenbosch, in Cape colony, where, however, it was plentiful.

52. Pratincola torquata (Linn.). South-African Stonechat.

Common throughout South Africa from the Cape to Durban.

53. **Parus niger**, Vieill. Southern Black-and-white Titmouse.

I met with a few specimens both at Durban and Pinetown. A female measured in the flesh 6·4 inches. Beak black; irides brown; legs slate-colour.

54. **Motacilla vidua**, Sundev. African Pied Wagtail.

I occasionally saw single specimens or pairs of this bird at the edges of the rivers and brooks near Durban.

55. **Motacilla capensis**, Linn. Cape-Wagtail.

An extremely common species in Cape colony, frequently seen in considerable numbers together. At Durban I did not meet with them in any thing like the same abundance. A specimen I shot measured 7·3 inches.

56. **Anthus pyrrhonotus** (Vieill.). African Pipit.

Whilst at Pinetown, in March, I saw several large flocks of this Pipit on the wet ground: these birds do not keep close together; so that a flock extends over a considerable space.

57. **Macronyx capensis** (Linn.). Orange-throated Lark.

I shot several in Cape colony, and also met with it at Durban.

58. **Macronyx croceus** (Vieill.). Yellow-breasted Lark.

Common about Pinetown, in Natal; and I also met with them at Durban. They are generally in pairs, and when disturbed from the high grass often fly to the topmost branches of some neighbouring tree.

59. **Turdus letsitsirupa**, Smith. South-African Thrush.

I saw a specimen of this Thrush which had been killed at Durban.

60. **Cossypha natalensis** (Smith). Natal Chat-Thrush.

I met with this bird at Durban amongst some scattered bushes in the more open country, and saw two other specimens of *Cossypha* near that town, but could not determine their species.

61. **Cossypha caffra** (Vieill.).

Very abundant in Cape colony, especially in the pine-woods about Capetown. In habits they are extremely lively, running swiftly when on the ground, at intervals spreading and erecting their fine rufous tails, and when in the higher trees constantly shifting their position. Length in the flesh 6·7 inches. Beak and legs black; irides brown.

62. PYCNONOTUS CAPENSIS (Linn.). Cape-Bulbul.

Common in Cape colony. While at Durban I confounded this with the next species; and as all the Bulbuls I met with were in bad plumage, I paid little attention to them. The present species has a dark red wattled eyelid; so that Mr. Sharpe's notes on this subject (P. Z. S. 1871, p. 131) will require revision, which I propose to give in a forthcoming paper on the subject. The names here adopted are those of Mr. Sharpe.

63. PYCNONOTUS NIGRICANS (Vieill.).

Very common about Durban and Pinetown. The eyelids are black, thick, but not wattled.

64. PHYLLASTREPHUS CAPENSIS, Swains. Cape-Jaboteur.

This is the commonest bush-bird about Durban. If one waits in a likely spot for a short time, they rarely fail to make their presence known by their constant jarring notes, as they approach quite close, keeping, however, well hidden amongst the leafy plants near the ground. I always met with them in pairs or small family parties. They occasionally differ considerably in size; two females measured respectively 8·5 and 7·9 inches. Beak horn-colour, inclining to white on the lower mandible; irides hazel; legs pale pinkish grey.

65. CRINIGER FLAVIVENTRIS (Smith). Yellow-bellied Criniger.

Another very common bird in the thick bush about Durban, where its loud notes may be constantly heard—and is not unfrequently seen, as it does not hide itself so carefully as most of the other bush-birds. Length in the flesh 9·2 inches; beak horn-colour, slightly paler towards the base of the lower mandible; irides brown; legs lead-grey.

66. Andropadus importunus (Vieill.).

Very common in the bush about Durban. Beak black; irides pale yellow; legs horn-colour.

67. Dicrurus musicus, Vieill. Musical Drongo.

Plentiful about Durban and Pinetown; in the evenings, just before sunset, I have seen parties of them at the edge of a wood or in the scattered bushes, flying out at intervals and hawking for insects in a very graceful manner.

68. Dicrurus ludwigi, Smith. Small Drongo.

Not uncommon about Durban, always in the thickest parts of the bush, where their loud harsh cry may be frequently heard. They are very active, and restless in their movements, and rarely fail to show their curiosity by approaching quite close to an intruder; but they seldom remain long in view. Beak and legs black; irides deep orange.

69. Oriolus larvatus, Licht. South-African Black-headed Oriole.

Common at Durban and Pinetown, preferring the more open country, and always in pairs. They have a loud call-note, which may be heard at a considerable distance. Beak brownish flesh-pink; irides red; legs slate-colour.

70. Batis molitor (Hahn & Küst.).

Plentiful about Durban and Pinetown, usually frequenting the thick bush, but not uncommonly taking up their position in the small scattered trees, like true Flycatchers. A female measured in the flesh 4·7 inches. Beak black; irides deep yellow; legs slate-colour. In the male the irides were pale yellow, slightly shaded with green on the outer edge.

71. Butalis adusta, Bp. Cinereous Flycatcher.

I only met with this species at Pinetown, in Natal, where it was not uncommon, usually in pairs, frequenting the small scattered trees.

72. Tchitrea viridis, Müll. Tchitrea Flycatcher.

Plentiful in the dense woods about Durban and Pinetown. They are lively in their habits, constantly flitting from bough to bough, and generally in pairs. Both male and female have the beak and legs grey, the former tipped with black; the wattled eyelids are of a bright greyish blue; irides dark brown.

73. MELÆNORNIS ATER, Sundev. Black Flycatcher.

Very abundant about Durban and Pinetown, where they frequent the scattered trees in clearings in the bush, generally resorting to the upper branches, often in family parties. Length in the flesh 8 inches. Beak and legs black; irides brown.

74. CAMPEPHAGA NIGER, Vieill. Black Caterpillar-eater.

I only met with a few specimens near Durban.

75. CAMPEPHAGA CÆSIA, Licht. Grey Caterpillar-eater.

Not very uncommon in the thick bush near Durban. A boy who was with me shot at one of these birds with a catapult, when it dropped a *Mantis* it was feeding on, but was so intent upon its prey, that it came quite close to pick it up again, and was dispatched by another shot.

76. LANIUS COLLARIS (Linn.). Fiscal Shrike.

Extremely common in Cape colony, and not rare in Natal, where I frequently met with it about Durban and Pinetown. I also saw it plentifully at Port Elizabeth.

77. LANIUS COLLURIO, Linn. Red-backed Shrike.

I shot it on several occasions at Durban.

78. LANIARIUS ICTERUS, Cuv. Yellow-breasted Shrike.

I procured one specimen from a collection which had been made at Durban, where, however, it is probably far from common.

79. DRYOSCOPUS CUBLA (Lath.). Puff-backed Shrike.

A very abundant species about Durban and Pinetown in the thick woods, where their jarring notes may be frequently heard. Length in the flesh 6·5 inches. Adult specimens have the irides bright golden yellow; beak black; legs grey. Immature birds have the irides brown; beak horn-colour, paler towards the base of the lower mandible; legs grey.

80. Dryoscopus boulboul (Shaw).

Very common in the thick bush about Durban, often in family parties, constantly on the move, and tolerably noisy. A male measured in the flesh 8·8 inches, a female 8·6. Beak dull black; irides dark brown; legs grey. The immature birds have the entire breast of a pale rufous-brown; beak horn-colour, fading into white at the base of the lower mandible.

81. Laniarius gutturalis (Müll.). Backbakiri Shrike.

Very common in Cape colony, especially about Capetown; I also found them plentiful at Port Elizabeth; but did not meet with them in Natal. They are generally seen in pairs, or in small family parties, frequenting the low bushes, and often running upon the ground. The black collar is sometimes entirely absent in immature birds.

82. Laniarius olivaceus (Shaw).

I shot two specimens in the thick bush near Durban, but never heard their note; and as they were very cautious in their movements, it was exceedingly hard to find them. Those that I met with were slowly climbing up amongst the tangled boughs.

83. Laniarius quadricolor, Cass. Red-throated Black-collared Shrike.

I saw several specimens which had been collected at Durban and Pinetown.

84. Laniarius similis (Smith). Yellow-browed Shrike.

Apparently of rare occurrence about Durban.

85. Corvultur albicollis (Lath.). White-collared Raven.

I saw it occasionally in Cape colony, but more frequently at Pinetown, near Durban.

86. Buphaga erythrorhyncha, Stanl. Lesser Beefeater.

Common about Durban and Pinetown, where they may be seen climbing all over the cattle in search of parasites. On approaching a flock thus engaged, they quickly resort to the backs of the animals, where they may be seen in rows, just before taking flight. On leaving they rise for some fifty or sixty feet, and then fly straight away. A young caged bird of this species at Pinetown was very tame, always flying towards any one who came near, and chattering most loudly if not taken notice of.

87. LAMPROCOLIUS MELANOGASTER, Linn. Black-bellied Glossy Starling.

This is the most abundant of the Glossy Starlings on the Berea hills about Durban, being more of a woodland bird than the next species, and always met with in flocks. Beak and legs black; irides golden yellow.

88. LAMPROCOLIUS PHŒNICOPTERUS, Sw. Red-shouldered Glossy Starling.

Plentiful in the more open country about Durban and Pinetown, where they were always in flocks, perching together on the tops of the small trees, whence they keep a sharp look-out, rendering it difficult to obtain a shot at them.

89. PHOLIDAUGES VERREAUXI, Finsch & Hartl. Verreaux's Glossy Starling.

To be met with about Durban and Pinetown, but apparently not very common.

90. AMYDRUS BICOLOR (Gmel.). Brown-and-white Glossy Starling.

I frequently saw flocks of this species in Cape colony and at Mossel Bay. In habits they much resemble our common Starling, but their wider wings give them a less compact appearance when flying. All the specimens I procured in January were in the moult. In mature specimens the beak is yellow, with the upper mandible and end of the lower one black; irides pale yellow; legs black. In immature birds the pale portion of the beak is buff.

91. AMYDRUS MORIO (Daud.).

This species frequents rocky districts, occasionally in large flocks. I saw it at Capetown, Ceres, and Port Elizabeth.

92. HYPHANTORNIS BICOLOR, Vieill. Black-backed Weaver.

Inhabits the thickest parts of the bush, and, being of an inquiring mind, frequently approaches an intruder within a few yards, still keeping concealed amongst the thick foliage, though its note is often heard as it creeps through the network of boughs. The beak is of a very pale horn-grey, shaded with black on the culmen towards the tip; legs lilac-pink; irides dark brown.

93. Hyphantornis spilonota (Vigors). Cape-Weaver.

I met with a flock of this Weaver in the open country to the east of the Umgeni, and shot two in very bad plumage; one had the irides bright yellow, the other had them brown—being probably male and female.

94. Euplectes taha, Smith. Taha Bishop bird.

I saw this species both in Cape colony and near Pinetown in marshy localities.

95. Vidua principalis (Linn.). Dominican Widow bird.

I met with it in Cape colony, and also about Durban and Pinetown.

96. Urobrachya axillaris (Smith). Scarlet-shouldered Reed-Finch.

Not uncommon about Durban and Pinetown, where it frequents the reedy districts. On the wing it has a curious slow flapping flight, very similar to that of the Hoopoe.

97. Niobe ardens, Reich. Red-collared Reed-Finch.

Tolerably abundant at Pinetown, where it frequents marshy spots.

98. Pyrenestes albifrons (Vig.). White-fronted Grosbeak.

I have shot this species at Durban and to the east of the Umgeni; but it does not appear to be common.

99. Estrelda astrild (Linn.). Waxbill.

Very common about Durban and Pinetown and in Cape colony. It is also the most abundant bird in St. Helena, where it has been introduced. I took a nest of this species at Pinetown on the 17th of March; it was placed on the ground in a thick tuft of grass, and contained five pure white eggs. The nest was larger but of the same shape as that of the common Wren, with a well-hidden aperture, was very thick, and composed entirely, inside and out, of a fine wiry green grass.

100. Estrelda incana, Sundev. South-African Grey Bengale.

These Finches are far from common at Durban, where, on the 8th of March, I took one of their nests, containing two pure white eggs. It was placed in a creeper overhanging the footpath, and was easily reached from the ground. In construction it was very similar to that of *Estrelda astrild*, but smaller and less compact, though made of the same materials.

101. Lagonosticta rubricata (Licht.). Ruby-breasted Bengale.

Tolerably abundant about Pinetown.

102. Passer arcuatus (Gmel.). Cape-Sparrow.

I shot several specimens of this Sparrow and also of the next species at Wellington, in Cape colony.

103. Passer diffusus, Smith. Southern Grey-headed Sparrow.

104. Crithagra sulphurata (Linn.).

Common in the pine-woods near Capetown.

105. Crithagra butyracea (Linn.). Cape-Canary.

I met with this Finch in the open country near the Paarl, in Cape colony.

106. Crithagra chrysopyga, Swains. Yellow-rumped Canary.

Very common at Pinetown.

107. Fringillaria capensis (Linn.). Cape-Bunting.

Abundant in Cape colony, where it appears chiefly to frequent the rocky districts. Where I saw it most numerous was at the Paarl, usually in pairs. Beak horn-colour, greyish towards the base of the lower mandible; irides dark brown; legs nearly black. Length of specimen in the flesh 6·1 inches.

108. Fringillaria flaviventris (Vieill.). Southern Yellow-bellied Bunting.

I shot but one specimen of this Bunting, at Pinetown, in the open country, near where the grass had been recently burnt.

109. Megalophonus apiatus (Vieill.). Clapper-Lark.

Not an uncommon Lark in Cape colony, where I found it amongst the low bushes in the plains. It flies but a short distance when disturbed, and never appears to run on the ground. The specimen I preserved had the beak dark horn-colour, with the basal two thirds of the lower mandible, and the edges of the upper one towards the gape, buffish flesh-colour; legs white, with a faint pink shade.

110. Megalophonus crassirostris (Vieill.). Thick-billed Lark.

Very plentiful in Cape colony.

111. Megalophonus africanoides, Smith.

I shot a specimen at Durban, where I occasionally met with it in the high grass at the edge of the bush. When disturbed it would only fly for a short distance.

112. Colius striatus, Lath. Cape-Coly.

A very common bird about Durban and Pinetown. They are mostly found in the thick scattered bushes in small flocks of from six to a dozen. When disturbed they fly in a straight line to the next nearest covert, one after another. On the 15th of March, while at Pinetown, I found a nest containing one pure white egg; it was placed in a bush two feet from the ground, and was open and shallow, the bottom part of old dried grass, with the sides and lining of dead leaves.

113. Corythaix musophaga (Dubois). White-crested Touraco.

A pair of these birds flew across my path while in the thick wood about twelve miles east of the Umgeni, when I procured one. Beak orange-brown; irides brown; legs black.

114. Corythaix porphyriolophus, Vig. Purple-crested Touraco.

This handsome species is fairly plentiful about Durban, especially in the less frequented woods to the east of the Umgeni and at Pinetown, where its loud rough notes, somewhat resembling the word "Tourakoo" repeated successively several times, may be frequently heard in the morning and evening. It resorts mostly to the larger trees, where I have frequently watched three or four playing together, hopping from bough to bough, depressing and expanding their tails, and at intervals displaying the rich crimson on their wings. There are few more striking birds than the present one and some of the allied species as they fly gracefully across the path in front, or are watched during their quaint but pleasing gambols. Beak and legs black; irides dark brown; eyelids scarlet.

115. Toccus flavirostris, Rüpp. Yellow-billed Hornbill.

I met with some very large flocks of this Hornbill to the east of the Umgeni, but did not see it elsewhere.

116. Pogonorhynchus torquatus, Dum.

Very common about Pinetown; but I never met with them nearer the coast. They were generally in pairs, frequenting the scattered trees at the edges of woods. Beak black; irides red-brown; legs slaty brown.

117. Ceuthmochares australis, Sharpe. South-African Coucal.

I shot two specimens at Durban, where they frequent the upper branches of the higher bush, rendering it very difficult to see them through the thick foliage. Length in the flesh 14 inches; beak chrome-yellow, with a clear triangular black mark extending about halfway down the culmen; irides crimson.

118. Centropus superciliosus, Rüpp. White-eyebrowed Bush-Cuckoo.

This is the common *Centropus* about Durban. I shot a few specimens; but they were in such bad plumage, both in March and April, that I did not preserve them.

119. Cuculus smaragdineus, Swains. Emerald Cuckoo.
Fairly plentiful about Durban and Pinetown, where they frequent the thick forest.

120. Cuculus cupreus (Bodd.). Golden Cuckoo.
The rarest of the three metallic Cuckoos about Durban, where I only saw it in collections.

121. Cuculus klaasi, Steph. Klaas's Cuckoo.
Not uncommon in the neighbourhood of Durban and Pinetown, at both of which places I shot specimens. It frequently selects an open branch of a large tree for its perch.

122. Treron delalandii, Bp. Delalande's Fruit-Pigeon.
I saw a specimen of this Pigeon at Pinetown. They generally keep well hidden amongst the foliage of the large trees, where, owing to their green colour, they are extremely difficult to observe; and relying on this natural protection they sit close, often allowing stones to be thrown into a tree before they will take wing.

123. Stictœnas phæonotus, G. R. Gr. South-African Speckled Pigeon.
I found this very common in the rocky districts of Cape colony, and occasionally feeding in large flocks on the arable land. I am told that it comes to Durban at certain seasons in great numbers; but I did not meet with it there in March or April. Beak horn-colour, fading into white over the nostrils; irides pale yellow; eyelids crimson-red; legs red.

124. Œna capensis, Linn. Black-throated Dove.
Very plentiful throughout Cape colony, where I always found them on the more open ground.

125. Turtur albiventris, Gray. Ash-bellied Turtle Dove.
In Cape colony this Dove is very abundant, frequenting both the woodland and the rocky districts, but is especially

abundant near springs, where its loud call-note may be constantly heard.

126. Peristera larvata (Temm.). Rufous-breasted Wood-Dove.

Very common in the thick bush about Durban, where its brown colouring renders it hard to detect as it sits motionless on the low creepers in the darker parts of the forest. When disturbed it flies rapidly, but for only a short distance; and I did not observe it at other times on the wing, as it never appears in the open. On the 11th of April I found two of their nests, placed about four feet from the ground, in the low creepers close to the same path, and nearly opposite to each other. The nests were similar to those of *Turtur auritus*; each contained two eggs nearly ready to hatch. Beak black; irides dark lilac; space round the eye and eyelids red, with the central portion above and below the eye grey; legs red.

127. Peristera tympanistria (Temm.). White-breasted Wood-Dove.

Very plentiful about Durban. Entire length in the flesh 7·8 inches. Beak deep lilac, tipped with horn-colour; irides very dark brown; eyelids deep lilac; bare space round the eye dark slate-colour; legs lilac-red.

128. Peristera chalcospila (Wagl.). Emerald-spotted Wood-Dove.

Common about Durban and Pinetown. I cannot agree with those authors who unite this species with *P. afra*, the latter bird having the spots on the wing steel-blue; for in the many specimens of *P. afra* Mr. T. E. Buckley and myself shot in Fantee, not one had any shade of green on these spots, while those which I have killed in S. Africa have the spots uniform metallic green. Length in the flesh 7·9 to 7·4 inches. Beak deep purple horn-colour; irides very dark brown; bare space round the eyes slate-colour; legs deep lilac.

129. Francolinusafer (Müll.). South-African Francolin.

I found this species fairly plentiful, either singly or in small coveys, between Wellington and Ceres, in Cape colony. When disturbed, their flight, though strong, is slow, and rarely sustained for any great distance.

130. FRANCOLINUS SUBTORQUATUS, Smith. Coqui Francolin.

The only species of Francolin I found near Durban; and as there are game-laws prohibiting Partridge-shooting earlier than the middle of April, I did not go out of my way to procure this species. Beak yellow, with the tip, culmen, and nostrils black; irides hazel; legs yellow.

131. FRANCOLINUS CAPENSIS (Gm.). Cape-Francolin.

I met with this bird only in Cape colony, where it is moderately plentiful.

132. TURNIX HOTTENTOTA (Temm.). Hottentot Button-Quail.

I found this species fairly plentiful in the long grass about Pinetown. Length in the flesh 6 inches. Beak flesh-colour, shaded on the culmen with pale brown; irides white; legs flesh-colour.

133. EUPODOTUS AFRA (Gmel.). Cape Knorhan Bustard.

I met with this species at Ceres, in Cape colony.

134. ÆGIALITIS HIATICULA (Linn.). Ring-Plover.

Not uncommon at Durban. The skin I brought home agrees perfectly with English-killed specimens.

135. ÆGIALITIS TRICOLLARIS (Vieill.). Treble-collared Sound-Plover.

I met with this Plover very plentifully at a small pond between Stellenbosch and the Paarl, in Cape colony, and occasionally close to Durban. It prefers fresh water to salt, and in habits is very similar to *Æ. minor*.

136. ÆGIALITIS MARGINATA (Vieill.). African Sand-Plover.

I constantly saw large flocks of this Plover on the marshy ground surrounding the Durban bay. A specimen I measured was 6·4 inches in length. Beak black; legs greyish flesh-colour; irides dark brown.

137. ÆGIALITIS SANCTÆ-HELENÆ, Harting. Wire-bird.

Only found in St. Helena, where I met with it on the barren rocky ground by the side of the road, about one and a half miles out of the town.

138. Ardea cinerea, Linn. Common Heron.

Plentiful both in Cape colony and Natal.

139. Herodias garzetta (Linn.). Little Egret.

At the mouth of Salt River, near Capetown, I shot the only specimen I saw.

140. Ardetta podiceps, Bp. South-African Little Bittern.

I shot an immature specimen of Little Bittern at Ceres, in Cape colony.

141. Scopus umbretta, Gmel. Hammer-head.

I found it near Ceres and in the neighbourhood of Durban. It appears to be common throughout South Africa.

142. Totanus canescens (Gmel.). Greenshanks.

Not uncommon about Durban.

143. Totanus glareola (Linn.). Wood-Sandpiper.

Also common at Durban.

144. Actitis hypoleuca (Linn.). Common Sandpiper.

I shot several specimens near Durban.

145. Tringa minuta, Leisl. Little Stint.

Frequently met with in flocks in Cape colony.

146. Calidris arenaria (Linn.). Sanderling.

Very plentiful at the mouth of Salt River, close to Capetown.

147. Parra africana, Gm. Greater African Jacama.

I met with a pair of Jacamas in a small pool near Durban, and, although I knocked them both down, I could not secure either.

148. Larus vetula, Bruch. South-African Black-backed Gull.

Common along the coast from Capetown to East London; and I occasionally saw it at Natal Point. This is the only species of Gull I recognized during my tour in South Africa.

149. Sterna cantiaca, Gmel. Sandwich Tern.

Common about Capetown. It was the largest Tern I saw there.

150. Sula capensis, Licht. South-African Gannet.

I frequently saw this bird between the Cape and Port Elizabeth.

IV.—*Notes on a 'Catalogue of the* Accipitres *in the British Museum,' by* R. Bowdler Sharpe (1874). By J. H. Gurney.

The following notes on Mr. R. B. Sharpe's very excellent and valuable 'Catalogue of the Accipitres or Diurnal Birds of Prey in the collection of the British Museum,' have been put together with two objects:—the first, to supply a few items of additional information respecting some of the species to which Mr. Sharpe's work refers; the other to record some points in regard to which my conclusions differ from those at which Mr. Sharpe has arrived.

The catalogue itself bears ample testimony not only to the scientific accuracy and laborious research of its author, but also to the great richness of that portion of the national collection to illustrate which the volume now under consideration has been devoted, though it is to be regretted that upwards of thirty species, included in the catalogue as forming part of the collection in the British Museum, appear to be only found there in the form of unmounted skins, and are therefore not represented in the ornithological gallery, where the student naturally expects to meet with every species which the museum possesses.

Mr. Sharpe separates the Griffon Vulture of Spain and Northern Africa as a subspecies under the name "*Gyps hispaniolensis*;" but I much doubt if such distinction can be maintained*. Mr. Sharpe considers that in Spain and Algeria "the Griffons are smaller and more rufous."

I doubt this supposed difference in size being constant, if indeed it exists at all; and to ascertain this with precision it would be needful that individuals of the like sex should be compared, as in *Gyps fulvus* the male bird is, so far as I have observed, usually larger than the female.

---

* If this subspecies be maintained as distinct, I think it should bear the specific name of *occidentalis*, which Bonaparte, in his 'Conspectus,'

The rufous colouring to which Mr. Sharpe alludes, I believe to be limited in Algeria to immature birds, and I think it probable that such is the case in Spain also. The specimen described by Mr. Sharpe as an adult of *G. hispaniolensis* is, in my opinion, proved to be immature by the ruff being composed, not of white down, but of "lanceolate feathers, whitish, with fawn-coloured margins." The colour of the crop-patch, to which Mr. Sharpe attaches much importance, seems to me to vary with age, becoming less rufous in adult specimens of *G. fulvus* than it is in those that are immature.

The following is a description of an adult male of *G. fulvus* from Souk Harras, in Algeria, which is preserved in the Norwich Museum, and which appears to me to be a very typical example of the ordinary form of *Gyps fulvus* in its adult stage.

Entire plumage pale stone-colour, except the feathers of the tail, which are darker, as are the quill-feathers of the wing, but the latter are shaded with grey—and also excepting the greater wing-coverts, in which the central part of each feather is of a darker tint than the general plumage; crop-patch dark stone-colour, mingled with narrow pale streaks; ruff composed of white down, and fullest at the back of the neck, head covered with sparse white hairs, especially on the hinder part.

So far as I have observed, the pale stone-coloured plumage, the ruff composed of white down only, and the hairy character of the filaments on the head are the invariable characteristics of the adult stage of *G. fulvus.*

The following are the measurements of the Algerian male specimen above described—entire length 45½ inches, wing from carpal joint 30, tarsus 4, middle toe without nail 3⅞.

---

applies, at p. 10, to the Griffon of "the Pyrenees and Sardinia;" and which A. E. Brehm also applies, with a full description, to the Spanish Griffon, in the Allg. deutsch. Zeit. 1857, pp. 434, 435; for which latter reference I am indebted to the kindness of Mr. Dresser.

Another Algerian specimen, from Laghouat, in the collection of Mr. J. H. Gurney, jun., is in very similar plumage, with the exception of some slight remains of immature dress, chiefly on the underparts, and is of exactly the same dimensions, except that the middle toe, which is unusually short in the Souk-Harras specimen (possibly from some defect in preparation), measures $4\frac{1}{2}$ inches, without the claw, in the example from Laghouat: of the latter specimen the sex is not marked; but its dimensions indicate a male bird.

That the Spanish Griffon Vultures are not always particularly rufescent, may be inferred from an immature Pyrenean specimen in the Norwich Museum (sex unknown), which wants the usual fulvous tint of the young birds of *G. fulvus*. The general colour of this specimen is a drab-brown, with pale shaft-stripes on the interscapularies and upper tail-coverts, and with the crop-patch a chocolate-brown of medium intensity.

An immature male from Tangiers, in the same collection, resembles the above, but is slightly paler and with the crop-patch pale fawn-colour. The measurements of this specimen (which I give, as the sex is known) are as under—entire length $45\frac{1}{2}$ inches, wing from carpal joint 28, tarsus $3\frac{3}{4}$, middle toe *s. u.* $4\frac{3}{16}$.

The Norwich Museum possesses two more immature specimens of this Vulture—one from Athens, and the other from North-east Africa (Nubia or Abyssinia): these two specimens are very similar and decidedly rufescent; the crop-patch in both is fawn-coloured, but rather darker in the African bird than in that from Greece.

A specimen of the Indian Griffon, for which Mr. Hume has proposed the specific name name of *fulvescens*, and which was presented to the Norwich Museum by Captain Marshall, who obtained it at Bhurtpoor, scarcely differs in coloration from the specimen from North-east Africa above alluded to, except in having the crop-patch a little paler. This individual is a female; and its measurements are as under—entire length 42 inches, wing from carpal joint 29, tarsus $3\frac{5}{8}$, middle toe *s. u.* $4\frac{3}{16}$.

The claim of *Gyps fulvescens* to specific distinction is one which it may perhaps be wise to keep in abeyance till a larger number of specimens have been compared with western examples of the like age and sex than has been the case at present; but Mr. Hume, at p. 149 of vol. i. of 'Stray Feathers,' certainly adduces some strong evidence of its distinctness, viz. that "the young, when only just able to fly, is paler and less rufous a great deal than the adult, and that the oldest birds appear to be the most rufous," and also that out of "thousands" of these Vultures observed by him in the neighbourhood of Ajmere, "never once did he see one of the pale birds," from which he infers that the adults are always rufescent.

In Mr. Sharpe's article, under the head of *Gyps rueppelli*, no description is given of this species in immature plumage; and it may therefore be not improper to mention that the young plumage of this Vulture, as well as its subsequent phases of coloration, are well described in Baron de Müller's 'Description des Nouveaux Oiseaux d'Afrique,' published at Stuttgart in 1853. To the particulars there given I would only add that there is a considerable individual variation between adult (or nearly adult) specimens of this Vulture, as to the conspicuousness, or the reverse, of the pale margins of the feathers on the greater part of the plumage; this difference may not improbably be due to the greater or less period which has elapsed since the last moult.

Mr. Sharpe gives the colour of the bill in a nearly adult specimen of *C. rueppelli* as "deep orange, inclining to greenish horn-colour on the edge of the upper, and on the whole of the lower mandible." I do not recollect to have seen an example of this species with the bill so coloured; the adults that I have seen have agreed in this respect with Dr. Vierthaler's statement, quoted by Baron de Müller in the article above referred to, that the colour of the beak is "de corne claire."

In younger birds the bill is much darker, and sometimes black, as recorded by Mr. Ayres in 'The Ibis' for 1860, p. 206.

In treating of the genus *Neophron,* Mr. Sharpe separates the dark *Neophron* of tropical Africa from that found in more southern latitudes, on the ground of its being "smaller, with a longer and more attenuated bill." The appearance of the bill is certainly slightly more attenuated in the tropical specimens which I have examined than in those from South Africa; but I have not found the absolute length of the bill to be greater in these than in southern examples; and as to general size, the one race somewhat runs into the other, as may be seen from the following measurements, taken from specimens in the Norwich Museum:—

	Wing from carpal joint. in.	Tarsus. in.	Upper mandible from forehead. in.	Height of upper mandible from edge to culmen. in.
1. Adult, Cape colony (said to be ♀)	22	$3\frac{3}{8}$	$2\frac{7}{8}$	$\frac{1}{2}$
2. ♂, immature, Natal	20	$3\frac{1}{2}$	$2\frac{7}{8}$	$\frac{1}{2}$
3. Adult, North-east Africa (said to be ♀)	$22\frac{1}{2}$	$3\frac{1}{8}$	$2\frac{3}{4}$	$\frac{7}{16}$
4. Immature, N.E. Africa	$19\frac{1}{4}$	$2\frac{5}{8}$	$2\frac{5}{8}$	$\frac{3}{8}$
5. Adult, Western Africa	19	$2\frac{5}{8}$	$2\frac{5}{8}$	$\frac{1}{2}$

Should the tropical race be admitted as specifically distinct, it will be unfortunate if the laws of priority compel the adoption of the specific name of "*monachus*" which Mr. Sharpe has assigned to it on the authority of Temminck, inasmuch as the same specific name is appropriated to the so-called Cinereous Vulture of more northern latitudes.

Mr. Sharpe, in his article on the Condor, has the following footnote:—"The Condor from Chili and the Straits of Magellan is always a much finer bird, with more distinct and larger wattles. When we know more of these birds it may prove to be a distinct species, in which case it must be called *Sarcorhamphus magellanicus.*"

That the southern Condor is specifically distinct, seems to me to be certain; but whether it should bear the specific name of *magellanicus* I doubt, inasmuch as Linnæus gives Chili and Peru as the habitat of his *Vultur gryphus* in the 'Systema Naturæ,' published in 1766. There appears to be no doubt that the large southern race extends to Chili; but whether it extends to Peru also is, I believe, at present uncertain. If, however, such should be the fact, I apprehend that the southern bird must in that case stand as *Sarcorhamphus gryphus*, and that some other name must be assigned to its smaller-combed and more northern congener.

Mr. Bartlett has been good enough to inform me that in July 1870, when the Zoological Society of London purchased a fine adult male of the southern Condor, which was brought from Chili by Mr. Weisshaupt, the same collector also brought thence "three or four young birds in their immature plumage, which, notwithstanding, exhibited in a very remarkable manner the comb and wattles." Mr. Bartlett adds that these young birds were larger than the adults of the small-combed race which were already in the Society's possession.

On the other hand, Dr. Sclater writes to me respecting a male of the small-combed species which lived for forty-five years in Wombwell's Menagerie, and was subsequently purchased by the Zoological Society, in the following terms:—"It certainly has not the extra development of comb and wattle which our Chilian bird had, and which are shown in Temminck's 'Planches Coloriées' (pl. 494)."

It is therefore certain that the difference in the comb and wattles of the males of the two races is not due to differences of age, as might at first sight have been supposed.

The splendid adult male of the southern Condor above referred to, which was brought from Chili, and was formerly in the gardens of the Zoological Society of London, passed, at its death, into the hands of Mr. E. Gerrard, jun., who informs me that its skeleton is now in the collection of the Royal College of Surgeons at Dublin, where it may afford the means of ascertaining whether any osteological differences of structure exist between this species and its more northern small-combed congener.

The entire plumage of the young birds of both these races of Condor is of a nearly uniform vinous brown; and Mr. Bartlett has known immature specimens of the small-combed race to moult from this plumage into the adult state whilst living in the Gardens of the Zoological Society; but Professor James Orton, in an interesting paper published in the 'Annals and Magazine of Natural History' for 1871, viii. p. 185, gives reasons for believing that there exists in the neighbourhood of Quito a Condor which permanently wears a plumage like that of the young of the two species of Condor already known; and, indeed, Professor Orton does not admit the fact of the ordinary northern Condor being brown when young, and supposes, though evidently incorrectly, that all the brown Condors belong to this alleged third species, which Mr. Sharpe introduces into his Catalogue under the name of "*Sarcorhamphus æquatorialis.*" I confess to having great doubts as to whether this third species will prove a reality, and I agree with Professor Orton in the remark which he makes in the concluding paragraph of his notice of this subject, that "further proof is wanted" of the existence of a brown Condor that is not the young of either of the two species already known.

Mr. Sharpe, in his Addenda, adopts Mr. Ridgway's generic name of *Rhinogryphus* for the "Turkey-Buzzard" Vulture and its nearest allies—and describes a new yellow-headed species, under the specific name of "*pernigra,*" as distinct from the orange-headed "*urubitinga*;" but whether they are really distinct, I at present somewhat doubt, especially as Mr. Sharpe states that both these supposed species occur in Peru, and also in Guiana. Mr. Sharpe partly relies, as a distinction, on the bird to which he assigns the name of "*pernigra*" having the upper surface of the shafts of the primaries brown, whilst in *urubitinga* they are white; but this may be a variable character in the yellow-headed Vultures, as it certainly is in the red-headed Auras.

The Norwich Museum possesses specimens of the red-headed Aura Vulture, in which the quills are brown, from California, Mexico, Ecuador, Chili, and Cuba, and specimens in which they are white or yellowish white from California, Northern Mexico, and Chili, whilst in a specimen from Jamaica, killed whilst moulting, the shafts of the old feathers are white, and those of the new are brown.

I am disposed to agree with Mr. Sharpe in the view which he takes of *Rhinogryphus burrovianus* being only founded on undersized specimens of *R. aura*; such a specimen, obtained in Florida, is preserved in the Norwich Museum, and has the outer side of the shafts of the primaries white.

The colour of the head in the Vultures of this genus (as observed in life) being so important a character, it may be worth while to quote a translation of the description of this colouring given by the late Prince Maximilian of Wied, as observed by him in the Aura Vultures with "yellowish white" shafts to the primaries which he met with in Brazil, and which I take to be the race to which Mr. Sharpe restricts the specific name of *urubitinga*, viz.:—

Adult. Iris beautifully red, between carmine and vermilion; bill and cere reddish white; crown and lower side of head pale violet or sky-blue; eyelids, side of head, neck, and throat beautiful grey-orange colour.

Immature. Iris blackish grey; head in very young birds reddish grey, whitish on the crown and over the eye; neck bluish, subsequently to which the head becomes reddish violet, with a whitish blue patch on the occipital region.

Mr. Sharpe does not follow Mr. Ridgway's example in separating the great Vulture of California from the genus *Rhinogryphus*, in which he includes this species, and, as it seems to me, with good reason; but in his article respecting it he omits to mention that in the immature bird the bare skin of the head and neck is of a blackish lead-colour, which is very apparent where not covered by the sparse brown down with which the head is partially clothed (especially towards the occiput) in young specimens. My friend, Mr. Alexander S. Taylor (of California), however, has stated his belief that this dark coloration of the head and neck is always found in the adult female bird as well as in immature specimens. A similar opinion is expressed in the following remark by Dr. J. G. Cooper, at p. 500 of the first volume on ornithology, published in the 'Reports of the State Geological Survey of California':—"The female retains a darker hue of head and neck through life [than the male], and also, as observed by Taylor, a row of black spots on the white portion of the wing-feathers."

Passing on from the Vulturidæ to the Polyborinæ, I may mention that the Norwich Museum possesses an adult specimen of *Polyborus cheriway* from Brazil, a habitat not quoted for this more northern race by Mr. Sharpe; but unfortunately we have no record of the district in Brazil where this specimen was obtained.

Referring to the succeeding genus *Ibycter*, I am able to supplement Mr. Sharpe's description of the adult plumage of *Ibycter ater* by some particulars respecting an immature specimen in the Norwich Museum from the river Amazon. In this example the white caudal band extends over the upper two thirds of the tail, and is crossed by five successive transverse black bars, increasing in breadth from the top downwards, the uppermost bar being about a quarter of an inch in depth, and the lowest nearly half an inch, causing the general appearance of the tail to bear a marked resemblance to the tail of the adult bird of *Ibycter chimachima*.

The remainder of the plumage of this specimen is of a paler and more purplish black than in the adult bird, except some portions of the plumage of the back and breast, which seem to have been recently moulted, and to have thus assumed the ordinary adult coloration.

A specimen resembling the above in the markings of the tail is figured in Temminck's 'Planches Coloriées' (pl. 342).

It seems probable that *Ibycter fasciatus* of Spix is merely the immature bird of *I. ater* in the plumage above described.

In a very nearly adult specimen from Quito, in the Norwich Museum, the pure white caudal band is varied by two small isolated black spots, which I have no doubt are the remains of the black transverse bars which cross this portion of the tail in the young bird. A similar stage of plumage, but with more numerous black spots, is figured in the 'Planches Coloriées' (pl. 37).

It appears to me that the late Mr. G. R. Gray in his 'Genera of Birds,' and in his 'Hand-list,' followed a natural arrangement in restricting the genus *Ibycter* to the arboreal species of this group, and in placing the non-arboreal species in the separate genus of *Milvago*; but Mr. Sharpe has united both under the head of *Ibycter*, influenced, no doubt, by the absence of any very trenchant generic characters by which the distinction of the two groups might be defined.

Mr. Sharpe comprises the genus *Cariama* amongst the Polyborinæ, but has not stated his reasons for this arrangement, which, I think, is to be regretted. It is, of course, very possible that the position assigned by Mr. Sharpe to this abnormal genus is the correct one, though I confess that I have grave doubts as to that being the case; but in the absence of any explanation of Mr. Sharpe's views on the question, I do not consider it desirable here to discuss it.

[To be continued.]

V.—*Notes on Severtzoff's 'Fauna of Turkestan'* (*Turkestanskie Jevotnie*). By H. E. Dresser.

In the Transactions of the Imperial Society of Naturalists of Moscow, vol. viii., a most important article on the fauna of Turkestan has been published by Mr. N. A. Severtzoff, and has also been issued as a separate work under the title of "Vertikalnoe e Gorozontalnoe Raspredalenie Turkestanskie Jevotnie" (Moscow, 1873), of which a copy has been sent to me by Mr. Severtzoff. Unfortunately the entire work is written in Russian, a language, to say the least of it, almost unknown to ornithologists of other countries. Having, thanks to the assistance rendered by Mr. Carl Craemers, made a translation of all that relates to ornithology, I give the following extracts, which I trust may be of use to working ornithologists, more especially as several new species are described by Mr. Severtzoff.

The range of the various species inhabiting or visiting Turkestan is carefully given in tabular form, divided into two sections, the first comprising the horizontal range, and being divided into four districts, viz.:—

I. The north-eastern district, comprising Semiratchje, Issik-kul, the upper Narin, Acksay, Kopal, and Vernoe.

II. The south-eastern district, comprising Chu, Tallas, Djumgal, Susamir, the lower Narin, Son-kul, and Chatir-kul.

III. The north-western district, comprising Karatau, the western Thian-shan mountains, the upper portions of the rivers Aris, Keless, Chirchick, and their tributaries, the lower Syr-Darja, from the sources of the Aris to Lake Aral and the delta of the Syr-Darja.

IV. The south-western district, comprising the Chodjent district, the entire Zarevshan valley from the summit of the Zarevshan mountains, the Syr-Darja river and the steppes between the latter river and the Kisil-cum.

The second section comprises the vertical range, showing the altitude at which the various species are met with. This is divided into five districts, viz.:—

1. From 600 to 1000 feet above the sea-level, comprising the salt plains.

2. The cultivated districts, grassy steppes, and gardens to 3000 or 4000 feet altitude.

3. The larch-woods, apple- and ash-groves of the Karatau and the lower Thian-shan mountains to an altitude of 4500 feet, or even in some places to 7000 or 8000 feet, or, say, an average altitude of about 6000 feet.

4. The fir and birch districts of the Thian-shan to an altitude of from 8500 to 10,500 feet, or to the juniper district.

5. The district covered with alpine grasses, below the line of eternal snow, at from 10,500 to 14,000 feet altitude.

Being unable to reproduce these tables, I have defined the range by referring to the districts above given under each species, which will, I trust, answer the purpose.

In cases where I can with a fair degree of certainty identify the species described, I have added short notes of my own, but have in every case deemed it best to copy Mr. Severtzoff's description where he has described a species as new.

1. GYPS HIMALAYANUS, Hume.

Gyps nivicola (Severtzoff), pp. 62 & 111.

Horizontal range. Resident in district I.

Vertical range. A winter visitant in district 3, a resident in district 4, where it breeds, and probably also nests in districts 3, 4, and 5.

This species, described as new by Severtzoff, is by him stated to be larger than *Gyps fulvus*, but resembling *G. indicus*, which, however, is smaller than *G. fulvus*. His description of the adult bird, from the upper Narin, at the head-waters of the Curmecta river, at an altitude of 9500 feet, is as follows:—"Head and neck covered with short white down, the lower throat with hairy light brown feathers on each side, marked with a line of white down; feathers on the fore part of the back and the upper surface of the wings fresh greyish yellow, marked with barely perceptible lighter lines (but this colour gradually fades to dirty white); feathers on the breast yellowish, marked with light-brown lines and spots; abdomen, under tail-coverts, lower back, and rump dull yellowish white; upper tail-coverts dark brown, marked with very distinct white lines; tail, quills, and larger wing-coverts blackish brown tipped with yellowish; under wing-coverts white, except that the first in order have a dark base. Total length 3·9–4·3 inches, extent 8·9–9·7." The young birds he describes as resembling the adults, but being much darker, and says that he saw, on the wing, some which were pure white, with only the wings and tail black, which he supposes to have been very old birds.

This species has been shown by Mr. R. B. Sharpe (Cat. Brit. Mus. Accipitres, p. 8) to be identical with the Vulture described by Mr. A. O. Hume ('Rough Notes,' i. p. 14), whose name will take precedence, and that of *G. nivicola* sink into a synonym.

2. Gyps fulvus, Gm.; Severtzoff, p. 62.

Horizontal range. Found during the breeding-season in districts I., II., III., and IV.

Vertical range. In districts 1, 2, 3, 4. It is stated to breed in district 3, and perhaps also in district 4.

3. Vultur monachus, L.

Vultur cinereus, Severtzoff, p. 62.

Horizontal range. Breeds in districts I., II., III., and IV., being also met with during the winter season in the two latter.

Vertical range. Observed both in the summer and in the winter season in districts 1 and 2, in summer only in district 5, and breeds in districts 3 and 4.

4. OTOGYPS CALVUS, Gray; Severtzoff, p. 63.

Horizontal range. An occasional summer visitant to district III.

Vertical range. Also an occasional straggler during summer in district 2.

5. NEOPHRON PERCNOPTERUS, L.; Severtzoff, p. 63.

Horizontal range. Breeds in districts I., II., III., and IV.

Vertical range. Is found during summer in districts 1 and 2, and is said to breed in district 3.

6. GYPAETUS BARBATUS, L.; Severtzoff, p. 63.

Horizontal range. Resident in districts I., II., III., and IV.

Vertical range. Occurs during the summer in districts 1 and 2, and breeds in district 3.

7. HALIAETUS ALBICILLA, L.; Severtzoff, p. 63.

Horizontal range. Occurs during winter in districts I., II., and III.

Vertical range. Occurs during winter in districts 1, 2, and 3 (in the last during passage), and is an occasional straggler during migration to district 5.

8. HALIAETUS LEUCORYPHUS, Pall.; Severtzoff, p. 63.

Horizontal range. During summer it is tolerably common in districts I., II., and III., and rare during the winter also in district III.

Vertical range. During the winter it is rare in district 1, and commoner there during summer, being also found at the latter season in district 2.

9. AQUILA FULVA, var. NOBILIS, Pall.; Severtzoff, p. 63.

Horizontal range. Resident in districts I., II., and III.

Vertical range. Resident in districts 1, 3, and 4, and occurs both during summer and winter in district 2.

β. *A. intermedia* (ad. *A. chrysaëtos*), Severtzoff, p. 63.

This form of the Golden Eagle, which I can scarcely regard as being even a true subspecies, has the same vertical range as the *A. fulva* above referred to; but its horizontal range is given as follows: "resident in districts III. and IV." Mr. Severtzoff speaks of it (p. 112) as *Aquila fulva,* var. *intermedia,* and writes as follows:—"The small feathers of the plumage are similar in colour to those in *Aquila chrysaetos*; but it has the white at the base of the tail, and the quills as in *Aquila fulva.* This species was met with in the salt plains, where it also breeds. In the Thian-shan mountains I only met with typical *A. fulva* (*A. nobilis,* Pall.). I may here observe that in the Southern Ural both forms of *Aquila fulva* occur (*Aquila nobilis,* Pall., and *A. intermedia*), and *Aquila chrysaetos*; but in the neighbourhood of St. Petersburg, where I frequently saw *A. nobilis* and *A. chrysaetos,* I scarcely ever met with *A. intermedia.*"

10. AQUILA HELIACA, Savigny.

Aquila imperialis, Severtzoff, pp. 63 & 112.

Horizontal range. Is found during the summer and breeds in districts I. and II.,—and besides breeding in district III., is found there in the winter also.

Vertical range. In district 1 it is resident; in district 2 it has been observed both in the summer and the winter; and in district 3 it occurs during passage, and may possibly sometimes remain to breed there. Severtzoff gives (p. 112) the following additional notes respecting this Eagle, viz.:—"During summer it is found in all parts of Turkestan, but breeds only in the salt plains near Jorteck. During the breeding-season it is only found near its breeding-haunts, but frequently wanders and changes its residence during the winter. Like other Eagles, it breeds only every alternate year. So soon as the young are full-grown they commence to change; but the plumage changes very slowly. During the winter the moult is arrested, and recommences in the spring of the following year; and they never breed whilst this moult is progressing. I purpose going more fully into this question in my proposed work on the ornithology of European and Asiatic Russia."

11. Aquila nipalensis, Hodgs.; Dresser, B. of Eur. pt. 33.

Aquila bifasciata, Gr. (ad. *A. orientalis*, Cab.); Severtzoff, p. 63.

Horizontal range. Breeds in district I., is to some extent a partial migrant and to some a breeding species in districts II. and III., and occurs only during migration in district IV.

Vertical range. Breeds in districts 1 and 3, and is found on passage only in district 2.

12. Aquila clanga, Pall.; Severtzoff, p. 63.

Horizontal range. Breeds in districts I., II., and III.

Vertical range. Breeds in districts 1 and 3, and is a straggler in district 2.

13. Aquila pennata, Gm.; Severtzoff, p. 63.

14. Aquila minuta, Br.; Severtzoff, p. 63.

β. Aquila albipectus, Severtzoff, p. 63.

Severtzoff divides *A. pennata*, as above, into three species—a view in which I cannot agree; for, as stated by me in pt. 32, 'Birds of Europe,' I have, after careful investigation, come to the conclusion that there is but the one species in Europe and Asia, and the light and dark specimens are but individual varieties of the same species. Severtzoff gives the range of all three so-called species above referred to as follows:—

"*Horizontal range.* Breeds in districts I., II., and III.

"*Vertical range.* Breeds in districts 2 and 3, and is an occasional straggler in district 4."

He further writes (p. 112) as follows:—

"There are in Turkestan three distinct forms of this little Eagle, two of which at least constitute good species: viz.,

"A. In *Aquila pennata* the differences in the various stages of plumage are very noticeable, as the young bird is brown, whereas the adult bird has the underparts white.

"B. In these forms the differences in the old and young birds are very trifling.

"*a.* In *A. albipectus* the underparts are white in all stages of plumage.

"*b.* In *A. minuta* the underparts are brown in all plumages.

"I have found the above differences to hold good in a number of specimens of all ages."

15. Pandion haliaetus (L.).

Pandion fluviatilis (sp. nov.?); Severtzoff, p. 63.

Horizontal range. Occurs in the summer in districts I., II., III., and IV.

Vertical range. Occurs in summer in districts 1, 2, and 3.

No observations are given respecting this bird, but merely its range is defined.

16. Circaetus gallicus (Gm.).

Circaetos brachydactylus (sp. nov.?); Severtzoff, p. 63.

Horizontal range. Found during summer in districts II. and III.

Vertical range. As above.

Besides this species Severtzoff includes as a different race, but without giving any particulars as to how it differs,

β. Circaetus orientalis, Brehm; Severtzoff, p. 63.

Horizontal range. Possibly a straggler during the summer season in district III.

Vertical range. In district 1 a straggler during the summer.

This latter will most likely be merely a variety of *C. gallicus,* as I have been unable to detect any difference between European and Asiatic specimens, and *C. orientalis,* Brehm, is merely a synonym of *C. gallicus.*

17. Pernis apivorus (L.); Severtzoff, pp. 63 & 112.

Horizontal range. Occurs rarely and accidentally in district III. during passage.

Vertical range. An accidental visitant to district 2 during passage.

He further writes (p. 112) as follows:—"The only specimen I saw in Turkestan I killed on the 17th September. It is remarkably large, and measures 27 inches in length, and 60 inches in extent, whereas the ordinary size of *P. apivorus* is, length 23 to 24 inches, extent 48 to 53 inches."

18. Buteo ferox (Gm.).

Severtzoff recognizes three forms of this species, as follows :

α. *Buteo leucurus,* Severtzoff, p. 63.

Horizontal range. Breeds in districts I., II., III., and IV.

Vertical range. Breeds in districts 1, 2, 3, and 4, and is common in district 2.

β. *Buteo rufinus,* Severtzoff, p. 63.

Horizontal range. Breeds in districts I., II., III., and IV.

Vertical range. Breeds in districts 1 and 2, in the latter of which it is common.

γ. *Buteo nigricans,* Severtzoff, p. 63.

Horizontal range. Is found during the breeding-season in districts III. and IV.

Vertical range. Breeds in district 2.

Respecting the above three forms he writes (p. 112) as follows :—" *B. rufinus* differs from *B. leucurus* in having dark bands on the tail, the latter having the tail uniform light brown, or greyish brown. The markings on the tail vary considerably, being sometimes confined to the terminal portion, whereas in other specimens the entire tail is very distinctly barred. *B. nigricans* is blackish brown or blackish in colour, the plumage having a metallic lustre : its tail is grey barred with black ; but in some specimens the tail is reddish grey, the nape, breast, and shoulders being similarly coloured, and in fact these specimens are intermediate between *B. nigricans* and *B. rufinus*. It appears that the gradation between these forms is about the same as that between *B. leucurus* and *B. vulgaris* ; and it would therefore seem as if these had originally belonged to one species, *B. vulgaris* inhabiting the northern forests, and *B. leucurus* inhabiting the southern steppes."

19. Buteo vulgaris, Leach ; Severtzoff, p. 63.

Horizontal range. Rare during winter in district I.

Vertical range. Rare during winter in districts 2 and 3.

20. Archibuteo lagopus (Gm.).

Buteo lagopus, Severtzoff, p. 63.

Horizontal range. Found during winter in districts I., II., and III.

Vertical range. Same as the horizontal range.

21. Milvus migrans (Bodd.).

Milvus ater, Severtzoff, p. 63.

Horizontal range. Is found breeding in districts I., II., III., and IV.

Vertical range. Found breeding in districts 1, 2, and 3.

As a subspecies Severtzoff includes in the tabular list only (p. 63)

β. *melanotis,* Temm. (*M. govinda,* Sykes),

the horizontal range of which he gives as similar to that of *M. migrans*; but the vertical range differs, it being only found during the breeding-season in districts 2 and 3.

22. Astur palumbarius (L.); Severtzoff, p. 63.

Horizontal range. Resident in districts I., II., and III, but everywhere rare.

Vertical range. Resident but rare in district 3.

23. Accipiter nisus (L.).

Astur nisus, Severtzoff, p. 63.

Horizontal range. Found during passage in districts I., II., III., and IV., and may possibly breed in district I.

Vertical range. Found during passage in districts 1, 2, 3, 4, and 5, rare in district 5, and may possibly breed in districts 3 and 4.

24. Accipiter cenchroides (Severtzoff).

Astur cenchroïdes (*badius*? Gm., Heugl.; var. *major*), Severtzoff, pp. 63 & 113.

Horizontal range. Found during passage, and is also to some extent to be met with breeding in districts II. and III.

Vertical range. Breeds in district 1, and is found on passage in district 2.

Severtzoff gives (p. 113) the following description and particulars respecting this species:—“*Astur cenchroides,* nob., is thus called because of the profusion of cross bars, broad as in *F. cenchris.* In coloration it closely resembles *Astur brevipes,* nob.; and the plate and description of *A. dussumieri*, Temm. (Pl. Col. 308, 336), taken from mounted examples in the Paris Museum, may refer to either of or both these species; but when alive these two species differ appreciably, as do also the skins when carefully examined. The differences are as follows:—

ASTUR CENCHROIDES.	ASTUR BREVIPES.
Sexes dissimilar in size, the male being much the smallest.	*Sexes* similar in size.
Wings short, as in *A. nisus*, when closed reaching to half the length of the tail, being half the entire length of the bird. In general form the bird is slight and slender, like *A. nisus*; the legs are slight and the feet long.	*Wings* long, when closed extending beyond the centre of the tail, the tail being short. The bird is thickset in form, and the legs and feet are stout and massive, like *A. palumbarius*.
Iris. In the young bird the iris is white; but in the nearly adult bird it is yellow, and in the very old bird bright red.	*Iris.* In the young bird the iris is brown, whilst the old bird has it bright yellow.
Tail. At all stages the central rectrices are crossed by seven to eight bars; and the outer ones have nine to ten bars; but these latter disappear in very old specimens.	*Tail.* The number of cross bars on the tail differ according to age, the young having five bars on the central and seven on the outer rectrices, whereas the adult birds have as many as from seven to nine.
In all stages of plumage this species has a long dark line along the throat.	The black line on the throat disappears as the bird gains its adult dress.

"The adult of *A. cenchroides* has the upper parts generally and the cheeks light grey, as in *Strigiceps* (*Circus*) *cyaneus*; quills greyish brown; tail light grey, shaded with white and barred with dark brown, these bars being somewhat indistinct on the central rectrices; underparts white, with a dark greyish brown line on the throat; breast, abdomen, and thighs marked with light brown lines, shaded off with yellow; flanks washed with dull yellowish; under tail-coverts pure white; bill blackish, towards the base bluish; cere and feet yellow; iris red . . . . . .

"The adult female is darker than the male, and the iris is light yellow; at least a female that I had caught and trained had yellow eyes; but it is possible that the iris turns from the white of the young plumage to yellow, and then to red.

"In the young bird the dove-blue colour of the adult is replaced by brown, the feathers being margined with yellowish; the underparts are marked with large elongated marks. In this plumage it differs from *A. brevipes* not only in having a white iris, but also in having the breast and abdomen similarly marked, whereas in *A. brevipes* the breast is marked with square blotches; but, besides this, the short wings and long tail of *A. cenchroides,* as well as the many bands on the tail, render it easily recognizable. The measurements of *A. cenchroides* are:—*Male,* total length 13·5–13·7 inches, extent 23–23·5, wing 7–7·4, tail 6·1, culmen 0·8, tarsus 2·15–2·2, middle toe 1·3–1·4. *Female,* total length 15·5–16·3, extent 26·6–28, wing 8·1–8·5, tail 6·8–7·1, culmen 8·25–9, tarsus 2·15–2·2, middle toe 1·3–1·4.

"In Turkestan we found this species during migration at Aulje-ata and Chimkent (and the Kirghis say that it also occurs in the forests), near the Syr-Darja, Chu, and Talass."

25. Falco sacer, Gm.; Severtzoff, p. 63.

Horizontal range. Occurs in districts I., II., III., and IV. during migration, and has been observed during the winter in districts III. and IV.

Vertical range. Is met with during migration in districts 1, 2, and 3, and during the winter in district 2.

26. Falco babylonicus, Gurney.

Falco tscherniaievi, sp. nov., Severtzoff, pp. 63 & 114.

Horizontal range. Is found during migration and breeds also in districts I., II., and III.

Vertical range. Breeds in district 1., is found during migration in districts 2 and 4, and may possibly breed in the latter, and is met with in summer, and perhaps breeds in district 3.

Mr. Severtzoff refers this bird to the species figured by Gould in part xx. 'Birds of Asia,' and with a query to *F. babylonicus,* Gurney, with which I believe it to be identical. The specimen on which he founded his species was obtained by General Tscherniaieff in June 1864, at the taking of Aulje-ata; and he says that he has altogether seen six specimens, two of which were taken from a nest in an island in the Volga, and one was obtained in Persia. Mr. Severtzoff describes it (p. 114) as follows:—"This species is an intermediate form between *F. peregrinus, F. peregrinoides,* and *F. lanarius,* Schl. With the latter it agrees in having a light brown head, a character distinguishing that species from the two former; and with these it has some similarity from its long middle toe and short tarsus, the middle toe of *F. lanarius* being short. In size it is intermediate between *F. peregrinus* and *F. peregrinoides.*

The adult female from Aulje-ata measures, length 18·7 inches, extent 40·2, wing 13·6, tail 6·5, culmen 1·2, tarsus 1·8, middle toe without claw 2·1.

A young male from Chimkent measures 18·2 inches in length and 39 in extent, and a young male from Sarepta, length 18·2, wing 13·3, tail 6·4, culmen 1·1, tarsus 1·8, middle toe 2 inches.

27. Falco peregrinus, Tunstall; Severtzoff, p. 63.

Horizontal range. Is found during migration, and probably breeds, in districts I. and II.

Vertical range. Is found during migration, and probably breeds, in districts 3 and 4.

28. Falco æsalon, Tunstall; Severtzoff, p. 63.

Horizontal range. Is met with during migration in districts I. and II., and during winter in districts II., III., and IV.

Vertical range. Is met with during migration in districts 1, 3, 4, and 5, and during the winter in districts 1 and 2.

Severtzoff includes a subspecies of the Merlin as

Falco æsalon, β. alaudarius, Brehm.

Horizontal range. Is met with during migration in district II., and during migration and in the winter in district III.

Vertical range. Is found during migration and in winter in district 2.

He further says (p. 114) that the first specimen he saw was obtained by Terentjeff late in September 1864, and he (Severtzoff) was struck at once by its small size. In colour, he writes, "it is more brown, the upper parts being almost pure brown; the nape is marked with blackish lines, the back and shoulders barred with greyish; tail light brown, with eight greyish cross bands, the underparts yellowish white, marked with very narrow reddish grey spots." . . . . . "The male killed at Chimkent in the winter of 1866 is greyer, the spots on the breast are broader, and in general colour it resembles the young of *F. æsalon*, but is much smaller, measuring, total length 12″ 3‴, extent 24″ 7‴, whereas *F. æsalon* measures 13 inches in length and 24″ 6‴ in extent. From these descriptions it may be judged whether *F. alaudarius* is a good species or not; but it would be necessary to have a larger series in all stages of plumage to determine this. Most probably a small male of so-called *F. æsalon* was shot on the Irtysh on the 16th of April, 1864. It measured, total length 12″ 1‴, extent 25″, wing 8″ 5‴, tail 5″, tarsus 13‴, middle toe 14‴, culmen 7‴. It differs in having the nape lighter-coloured, the feathers being tipped with white; the feathers on the head, back, and wings are tipped with yellowish, and the tail is strongly barred with blackish."

29. Falco subbuteo, L.; Severtzoff, p. 63.

Horizontal range. Breeds in districts I., II., III., and IV.

Vertical range. Breeds in districts 1, 2, and 3.

30. Tinnunculus alaudarius (Gm.).

Cerchneis tinnunculus, Severtzoff, p. 63.

Horizontal range. Is met with during passage, and to some extent during the breeding-season, in districts I. and II., and occurs also during the breeding-season and in the winter in districts III. and IV.

Vertical range. In district 1 it occurs during passage, breeds in districts 2, 3, and 4, being met with in winter in district 2, and occurs rarely during the summer in district 5.

31. Tinnunculus cenchris (Cuv.).

Cerchneis cenchris, Severtzoff, p. 63.

Horizontal range. Breeds in district III. in the mountains of Karatau, and in district IV.

Vertical range. Occurs during the summer, and may possibly breed, in district 1, and breeds rarely in districts 2 and 3.

32. ERYTHROPUS VESPERTINUS (L.); Severtzoff, p. 63.

Horizontal range. Occurs during passage in district III.

Vertical range. Is met with during passage in districts 1 and 2, and is a rare straggler during the summer to the latter district.

33. CIRCUS ÆRUGINOSUS (L.).

Circus rufus, Severtzoff, p. 63.

Horizontal range. Is found during the breeding-season in districts I., II., III., and IV.

Vertical range. Breeds in districts 1, 2, and 3, and occurs during summer in district 5.

34. CIRCUS CYANEUS.

Strigiceps cyaneus, Severtzoff, p. 63.

Horizontal range. Is found during the breeding-season in districts I. and II., and is resident in districts III. and IV.

Vertical range. Is resident and breeds in districts 1 and 2, occurs in district 3 during the breeding-season, and in the summer in districts 4 and 5.

35. CIRCUS SWAINSONI, Smith.

Strigiceps pallidus, Severtzoff, p. 63.

Horizontal range. Occurs during the breeding-season in districts I., II., and III.

Vertical range. The same as the horizontal range.

Respecting these two Harriers, Mr. Severtzoff remarks (p. 115) that the best distinctive character to distinguish them is the marking of the rump. In *C. cyaneus,* he says, the rump is white, unspotted; but the feathers are marked with narrow lines, whereas in *C. swainsoni* the rump, which is white and lineated, is marked with broad and very distinct cross bars, which are grey in the male and brown in the female and young. These differences, he says, are constant, and by them the two species can be discriminated in every stage of plumage.

36. CIRCUS CINERARIUS (Montag.).

Strigiceps cineraceus, Severtzoff, p. 63.

Horizontal range. Is found during the breeding-season in districts II., III., and IV.

Vertical range. Is found during the breeding-season in districts 1, 2, and 3.

37. SURNIA FUNEREA (L.).

Surnia nisoria, Severtzoff, p. 63.

Horizontal range. Is resident in district I.

Vertical range. Probably occurs during the winter in district 3, and is resident in district 4.

38. NYCTEA SCANDIACA (L.).

Surnia nivea, Severtzoff, p. 63.

Horizontal range. Occurs during winter in district I.

Vertical range. Occurs during winter in district 2.

39. ? CARINE GLAUX (Sav.).

Athene noctua orientalis, Severtzoff, p. 63.

Horizontal range. Resident in districts II., III., and IV.

Vertical range. Resident in districts 1 and 2, is found in summer, and may possibly be resident, in district 5. Its occurrence in district 3 is doubtful.

Respecting this species Mr. Severtzoff writes (p. 115) as follows:—"*Athene orientalis* differs from *Athene noctua* of Europe in being greyish brown, like *Athene noctua meridionalis*, from which latter it differs in having its legs covered thickly with feathers; like *Nyctala tengmalmi*, *A. noctua* has the orifice of the ear very large, whereas it is small in *A. orientalis*. *Athene orientalis* is called *Ay-chay* by the Kirghis, from its cry, and also *Hay-kis* (literally "inch-quill") I think that, taking into consideration the pale colour and feathered legs, *A. orientalis* should not be considered a mere variety, but a good species." This bird, described by Severtzoff, may, I think, possibly be *A. nudipes*, Hodgs., respecting which Mr. Blanford writes (Zool. of Persia, *Aves*, pp. 117,

118) as follows:—" *A. nudipes,* Hodgs., of which specimens exist in the British Museum, appears distinct from *A. glaux.* In the former the toes are feathered above to the base of the claws. I do not think Hodgson's species has ever been described."

40. Syrnium aluco (L.); Severtzoff, p. 63.

Horizontal range. Is rare and may be sedentary in district III., and is met with sporadically on the Chatir-kul river.

Vertical range. May possibly be sedentary in district 3.

41. Strix flammea (L.); Severtzoff, p. 63.

Range the same as that of the preceding species, except that it occurs sporadically in the mountains near the Aris river.

42. Scops giu (Scop.).

Ephialtes scops, Severtzoff, p. 63.

Horizontal range. Is found during the breeding-season in districts I., II., and III.; during migration, and possibly breeds, in district IV.

Vertical range. Occurs during migration in district 2, and during the breeding-season in district 3.

43. Bubo ignavus, Forst.

Bubo maximus (var. *B. turcomanus,* Eversm.), Severtzoff, p. 63.

Horizontal range. Resident in districts I., II., III., and IV.

Vertical range. Resident in districts 1, 2, and 3.

The species here referred to is evidently the pale eastern form of the Eagle Owl described by Eversmann as *Bubo sibiricus,* and which Mr. Blanford considers to be a distinct species (*cf.* Zool. of Persia, *Aves,* p. 115), but which I only regard as a variety of *B. ignavus.*

44. Asio accipitrinus (Pall.).

Ægolius brachyotus, Severtzoff, p. 63.

Horizontal range. Common during migration in all four districts, but very rare in the summer or winter. It has been observed during the winter in district IV.

Vertical range. Common during passage in districts 1, 2, and 3.

45. Asio otus.

Ægolius otus, Severtzoff, p. 63.

Horizontal range. Found throughout the country and during passage, but is very rare at other seasons.

Vertical range. Occurs during migration in districts 1, 2, and 3, and has been observed during the winter in districts 1 and 2.

[To be continued.]

VI.—*On two apparently new Species of Penguin from New Zealand.* By Dr. O. Finsch, Hon. M. B.O.U.

In a communication from Captain F. W. Hutton, dated "Dunedin, 30 September, 1874," I received for inspection the subjoined descriptions of two kinds of Penguins, lately procured on the shores of New Zealand. Being pretty well acquainted with the species of the family Ptilopteri, on which I have a monograph nearly ready for publication, I do not hesitate to assert, after a careful comparison, that they both belong to undescribed species.

Eudyptes vittata, Finsch.

? *Aptenodytes papua,* Vieill. (nec Forst. nec Gmel.) Gal. Ois. ii. p. 246 (nec diagn.) tab. 299.

"Culminicorn compressed, narrowing posteriorly; latericorn flattened. Top of the head brown, inclining to bluish on the front, and passing into pale brown towards the back of the head. Sides of the head and throat brown; a broad superciliary white streak from the angle between the culminicorn and latericorn to the back of the head, the feathers not prolonged. The whole of the upper parts of the neck and back brown, inclining to bluish in places. Under surface pure white. Outer surface of wings brown, not margined posteriorly; inner surface white, with brown patches on the proximal and distal posterior corners. Bill (dry) reddish brown. Feet (dry), toes red, webs blackish.

"*Locality.* Dunedin (a single specimen).

"Wing 7·1 inches; bill to gape 2·32, culmen 2·1, breadth ·75, height in middle ·95; mid toe 2·15, claw ·75; hind toe ·35, claw ·25.

"Distinguished from *E. pachyrhynchus* by its compressed bill and short wing and hind toe, as well as its general colours. About the same size as *E. pachyrhynchus.*" (*Hutton.*)

Captain Hutton suggests that this may be Latham's "Red-footed Penguin" (Gen. Syn. iii. p. 572), but without reason, as a careful examination of the synonymy shows that Latham's description is based on "the Penguin" of Edwards (t. 49 et t. 94, head on right hand), as is also "*Aptenodytes catarractes*" of Forster (Comm. Soc. Reg. Gotting. iii. 1781, p. 145) and Gmelin (Linn. Syst. Nat. ii. p. 558), and "*Phaëton demersus*" of Linné (S. N. p. 219), and Brisson's "*Catarractes*" (Ornith. iv. p. 102). All these descriptions are simply derived from Edwards's figure, which represents a bird the existence of which, in my opinion, will ever remain doubtful, being very likely based on a made-up bird. I do not understand how G. R. Gray (Handl. of B. iii. p. 98) and Schlegel (Mus. P.-B. Urinat. p. 8) could identify Edwards's inaccurate figure with *E. chrysocoma,* Forst., and Gmelin (*Pinguinaria cristata,* Shaw), even supposing it to be the young bird, without tuft—as Edwards's figure, besides other inaccuracies, shows a bird with *Mergus*-like legs, the tarsus being longer than the middle toe.

E. vittatus, if indeed a true *Eudyptes,* is easily distinguished from all other members of the Penguin group by its broad white superciliary streak, which runs from the base of bill to the back of head, but which does not consist of elongated feathers.

A close examination of all the existing representatives of Penguins leads me to the belief that very probably to this new species belongs the figure of a Penguin which Vieillot erroneously published under the name of "*Aptenodytes papua*" (Gal. des Ois. ii. 1834, p. 246, pl. 299), but which is not the well-known species of Sonnerat, Forster, and Gmelin, which Mr. Sclater, from the unfitness of the name, proposed to call *Pygoscelis wagleri* (P. Z. S. 1861, p. 47)*. To judge from Vieillot's figure and the French description (not the Latin diagnosis, which relates to the true *papua*), the bird very much resembles our *E. vittatus*, especially in having the white superciliary streak, which runs to the occiput; but from the delineation of the beak it would appear to be a true *Spheniscus*, showing the base of the maxilla grooved, and the tip of the mandible truncated. Vieillot unfortunately does not mention the origin of the specimen; but as it was drawn from nature by Oudart, the specimen will still probably be found in the galleries of the Paris Museum.

---

* [Should not this be called *P. tæniata*, Peale?—Ed.]

EUDYPTES ATRATA, Hutton.

"Culminicorn broad and rounded, not tapering posteriorly. Latericorn much swollen, with an oblique groove near its base. Above, from the top of the head to the tail, blue-black. Sides of the head, throat, and whole under surface jet-black. A thin interrupted yellow line from the bill, over the eye, and produced posteriorly into a long yellow crest. Bill (dry) pale brownish red. Feet (dry) black, inclining to reddish black on the toes.

"Wing 7·7 inches; tail 4·65; bill to gape 2·75, culmen 2·55, breadth ·87, height in middle 1·22; middle toe 2·0, claw ·7; hind toe ·1, claw ·1.

"*Locality*. The Snares (a single specimen only).

"Distinguished by its massive, deep bill, its very small hind toe, and long tail.

"About the same size as *E. pachyrhynchus*." (*Hutton.*)

This species cannot be confounded with any other, regard being paid to the jet-black coloration of its under surface.

VII.—*Ornithological Notes made at Chefoo (Province of Shantung, North China)*. By R. SWINHOE, H.M. Consul.

[Continued from vol. iv. p. 447, and concluded.]

42. LORD WALDEN'S SHRIKE. *Lanius magnirostris*, Less.

I before noted how we found this Malacca species a numerous visitor in summer to the places in Central China on the Yangtsze (P. Z. S. 1870, p. 131). I did not know at the time that it is also a visitor to the north, as I never detected it passing through Amoy*. On the 31st May Mr. Campbell sent me an adult female from Lighthouse Island; and on the 27th August I got an immature bird, which, judging from its appearance, I should say was bred somewhere in our neighbourhood.

The adult female measured 6·75 inches. Wing 3·4; first quill ·92, 1·2 shorter than the second, which is ·49 shorter than the third and fourth, the longest; wing-tip 1·7 short of tail-tip, ·77 longer than tertiaries. Tail 2·8, of twelve graduated feathers, of which the two outer are most so, the outermost being ·5, shortest. Bill deep indigo-grey, ·6 from forehead, ·85 from gape, ·35 deep at base. Tarsi ·9 in front, middle toe and claw ·65. Feet and toes lavender-grey, dingy on soles.

Young of the year.—Bill bluish flesh-colour on the basal portion, deep brown on the apical portion. Legs and toes violet-leaden, with yellowish grey soles and brownish nails. I have an immature bird of this species, procured by Mr. Wallace in Malacca. This would rather prove that some individuals of this Shrike stay in Malacca to breed, while many wander north for the same purpose.

43. Bull-headed Shrike. *Lanius bucephalus,* Temm. & Schleg. Faun. Jap.

Constable Webster got a young male of this Shrike on Lighthouse Island on the 5th October. It is reddish brown on the upper parts, particularly so on the crown and nape; the throat, axillaries, and vent are clear cream-colour, the rest of the underparts more or less rufous, with curvilinear striations. Its bill was plumbeous fleshy brown, the edge of upper, basal half of lower, and inside of mouth being flesh-colour. Length 8 inches. Wing 3·4, its tip is ·5 longer than that of tertiaries, and 2·8 short of tail-tip. Tail 3·6, graduated, the outermost being 1 inch the shortest.

I have a similar immature specimen (marked female) from Amoy, shot there one winter many years ago. An adult female, procured at Tientsin by Mr. Fleming, is rather smaller than the other two, with shorter wing, a much less heavy black bill, and dark brown legs; its underparts are dingy whitish without rufescence, but with plenty of dark striations and mottlings, which mark also the throat and vent; its axillaries are dusky; its back is browner, while rufous and blackish cross bars of juvenility still mark many of its scapulars and upper tail-coverts. I take this to be the ordinary plumage of the female. The adult male I have never had the pleasure of seeing.

---

* I now find that my *L. incertus* from Amoy (P. Z. S. 1871, p. 376) is a partially moulted specimen of this species.

44. PHILIPPINE SHRIKE. *Lanius lucionensis,* L.

On the 31st May, in company with the specimen of Lord Walden's Shrike, Mr. Campbell sent me a pair of adults of this species. These were certainly in breeding-condition; and their plumage ought correspondingly to have been nuptial; but they were in reality dingier than specimens shot in Amoy in April. The fine cinnamon-buff of the underparts has paled away; and the back is rather greyer. Still the female shows a few immature markings on her flanks and upper tail-coverts. The male that I procured in Talienwan on the 26th June, 1860, is even dingier. I have an immature bird procured at Peking in the September of the same year. This is very rufous on the upper parts and tail, and bears some resemblance to the young of *L. magnirostris,* but may be distinguished at first sight by the existence of a dark eye-streak, which is quite wanting in the other at the same stage, and by the continuous striation across the breast, which is only lateral in the other. I transcribe my note on a fresh Chefoo adult.

"♂. Length 7·75. Wing 3·48, first quill 1·1 long, second 1·23 longer, third and fourth ·48 longer again, and slightly longer than the fifth. Wing-tip 2·4 short of tail-tip, ·65 longer than tertiaries. Tail 3·75, outer rectrix ·95 shortest, next inwards ·35 shorter than the others, which are subequal. Tarse in front ·85; middle toe and claw ·88. Bill in front ·55, from gape ·95."

45. GREY MINIVET. *Pericrocotus cinereus,* Lafresn.

A female of this was procured in May.

46. SIBERIAN FLYCATCHER. *Butalis sibirica* (Gmel.).

This was amongst the summer arrivals; and on the 31st May Mr. Campbell sent me from Lighthouse Island three females and one male. Both sexes abounded in fat; the males had small black testes, and the females only diminutive eggs, both thus showing that they had further yet to travel. Still some few must have bred not far from us; for on the 15th Sept. I got a full-plumaged young bird in the spotted dress. This was also obtained at Lighthouse Island; so it might have come across the gulf. I took down the following note on a fresh female:—

"♀. Length 5 inches. Wing 3·2, first quill ·45, second ·2 shorter than the third, which is the longest in the wing, and slightly longer than the fourth; wing-tip ·88 longer than the tertiaries, ·75 short of tail-tip. Tail 2 inches, centrals ·2 shorter than the rest, which are equal."

The immature bird is darker in plumage than the adults, and is at once distinguishable by the small arrow-head shaped yellowish spots that speckle its upper parts, larger on the rump and upper tail-coverts. Its breast and belly are mottled with blackish spots on a white ground.

47. SMALL GREYISH-WHITE FLYCATCHER. *Butalis latirostris*, Raffles.

A male of this species was received with the adults of the foregoing on the 21st May. We already know that it is a summer visitant to Amoorland.

48. EASTERN ROBIN FLYCATCHER. *Erythrosterna albicilla* (Pall.).

I received from Mr. Campbell on the 15th May a female of this species with a white throat. It was unfortunately too shattered to preserve. On the China coast in winter we usually get white-throated examples, either females or immature birds; but I procured one at Pekin on the 15th September, 1868, the throat of which is partly red. This I believe to be a young male.

49. BLUE MAGPIE. *Cyanopolius cyanus* (Pall.).

The bird of this description is larger at Chefoo, with a distinctly larger bill than Shanghai examples. It affects large trees, is more open in its habits, and is frequently to be seen in parties in company with the pied species. I was in hopes it might turn out to be the *C. melanocephalus*, Vieill., which is expressly stated to come from China; but on turning to the Hist. Nat. des Ois. d'Afrique, plate 58, I find the figure of a bird with the throat and cheeks *black*; and in the description of the species I read, " Le dessus de la tête, les joues et la gorge d'un noir mat." In these respects our bird does not differ from the more southern species; and I scarcely think superior size, or variation in manners, justifies specific separation. The bird at Chefoo is called the Lan Ya-tcheo, or Blue Magpie, and lays eggs nearly as big as her pied relative. Its nest is small, shaped like that of a Crow, without canopy, and often built on large trees at no great distance from that of the Pied Magpie. When deserted they also are sometimes taken possession of by the Red-leg Falcon. Dr. Williamson induced the boys of the village Tung-Hing (where he resided, superintending a missionary station) to collect birds' eggs for me. These brought me ten eggs of this species on the 18th of May. One egg was small, with a greenish ground-colour, much as that represented in Dr. Bree's 'Birds of Europe' (i. p. 142) for the egg of *C. cooki*, Bp., of Spain and Portugal. The others were a good deal larger, more elliptical, and more like those of the Pied Magpies, of a lighter colour, and covered with larger and darker spots. They are nearer that of the Alpine Chough (see p. 154, of the work referred to). M. Taczanowski, of Warsaw, has sent me a Blue Magpie from the river Onon, in Russian Mantchuria. This is of the size and proportions of the bird that abounds near Shanghai, and extends along the alluvial banks of the Yangtsze for over 1000 miles, but is paler and greyer, and has a more boreal appearance. A specimen from Hakodadi, N. Japan, in Mr. Howard Saunders's collection, is like the Shanghai bird. On the strength of this information this larger bird of Chefoo is almost worthy of recognition as a distinct race.

50. PIED MAGPIE. *Pica media*, Blyth.

The Ya-tcheo (M. D. 11811, 80794), or Crow-bird, as this species is named by the Northern Chinese, is numerous at Chefoo, being found in parties in every clump of high trees; and their large canopied nests of twigs may be seen in the higher branches of most trees.

This and the last were the only species of the Crow family that I met with at Chefoo; but in the Manuscript Illustrations of the birds of the neighbourhood, above referred to, the following additional species are figured, with their names in the vernacular attached:—

(1) *Garrulus sinensis*, Gould. Sung y'a (M. D. 9578, 11818), or Pine-Crow.

(2) *Corvus torquatus*, Lesson. Yu lao y'a (M. D. 12560, 6923, 11818), or Gemmed Old Crow.

(3) *Fregilus graculus* (L.). Shan lao y'a (M. D. 9087, 6923, 11818), or Hill Old Crow.

51. GREYISH STARLING. *Sturnus cineraceus*, T. & S., Faun. Jap.

Flights of these birds were about the fields when we first arrived at Chefoo; but the natives never brought it to me among their captures. On one occasion they brought three eggs, which I made out to belong to this species. They resembled the eggs of *Acridotheres cristatellus*, of the south, but were more ovate in form.

52. DAURIAN STARLET. *Sturnia daurica* (Pall.).

A specimen of this is figured in the Manuscript Illustrations, adhering to a tree, with the name T'ee-shoo-p'e (M. D. 10073, 9337, 3297), or Stick-to-the-bark. This name in Peking is given to the Goatsucker. This I noted before (in P. Z. S. 1870, p. 439), but, not knowing the Chinese characters, rendered the sounds as I understood their meaning. The artist of the present work has evidently figured a wrong bird.

These little Starlings did not visit our houses and pry about for breeding-sites as the *Sturnia sinensis* does in South China. Carles shot a pair on the 28th of May in the "Bois de Boulogne," on which I took the following note:—

"♂. Length 7 inches. Wing 4·3, 1·3 longer than tertiaries, ·6 shorter than tail; first quill slightly shorter than the second, which is the longest in the wing. Tail 2·25, of twelve nearly equal feathers; upper tail-coverts ·9 short of tail-tip, under tail-coverts ·1 short. Bill in front ·63, from gape ·83; its colour, with that of the inside of mouth, greyish black. Iris black. Tarse 1·1; middle toe and claw 1; all greenish leaden colour. Large grey testes, much swollen. Stomach containing remains of small flies and beetles.

"♀. Length 6·85. Wing 4·2. Tail 2·18. Bill in front ·62, from gape ·82. Tarse ·95; middle toe and claw 1. Membrane round eye black, as in the male. Bill rather bluer than in male; legs the same. One large yelk nearly ready for laying, and two smaller ones to follow."

This pair would certainly appear to have been breeding in the neighbourhood. I have never procured this species on the southern coast.

53. SISKIN. *Chrysomitris spinus* (L.).

Occurred in small flocks in the "Bois de Boulogne" in May.

54. GOLDEN-WING. *Chlorospiza sinica* (L.).

A resident species in favourable localities. I have seen it flying over head and twittering its Linnet-like notes, while the golden hue of its quills was conspicuous against the clear sky. I procured no specimens. Its native name, as in the south, is Kin-che (M. D. 6369, 858), or Golden-wing.

55. BRAMBLING. *Fringilla montifringilla*, L.

The Hoo-p'ee neao (M. D. 4078, 8297, 7946), or Tiger-skin bird, so called, still fluttered about the "Bois de Boulogne" in small parties in the beginning of May, and were eagerly sought after by the trappers, who attracted them by caged decoys. It seemed a great favourite among the townsfolk.

56. TREE-SPARROW. *Passer montanus* (L.).

Called Ma-cheo (M. D. 7463, 10794), or Horse-bird, in the south, and Kia-cheo (M. D. 5398, 10794), or House-bird, at Chefoo.

57. Eastern Hawfinch. *Coccothraustes japonicus,* Bp.

Name in the MS. Illustrations of this species T'ee Tsuy (M. D. 10087, 11209), or Iron-bill. I did not meet with the bird at Chefoo.

58. Black-tailed Grosbeak. *Euphona melanura* (Gmel.).

Name in the MS. Illustrations of this species Tsao-hwa (M. D. 10564, 4199), the *Tsao*-flower (a water-flag or lily). It did not occur to me.

59. Masked Grosbeak. *Eophona personata* (T. & S. F. Japon.).

Name in the MS. Illustrations La-tsuy (M. D. 6854, 11209), or Wax-bill. This is applied to the preceding in the south, where this larger bird does not occur.

60. Rose Finch. *Carpodacus roseus* (Pall.).

In the MS. Illustrations as the Choo-sha-leao (M. D. 1256, 9065, 7060), or Cinnabar Finch. Père David procured this at Peking.

61. Ruddy Bunting. *Euspiza rutila* (Pall.).

On the 17th May the birdcatchers brought me a female of this species. I had not seen this sex before, and was quite at a loss as to what it was. A reference to Pallas's 'Zoographia Rosso-Asiatica' set me right. I took the following note on the bird:—

"♀. Length 5 inches. Wing 2·8; first, second, and third quills nearly equal and longest, fourth a little shorter; wing-tip ·45 longer than tertiaries, 1·4 short of tail-tip. Tail 2. Tarse ·63, middle toe and claw ·76. Legs and claws yellowish flesh-brown, yellowish on soles. Bill brown on upper mandible, purplish flesh-colour on lower. The eggs in this specimens were not enlarged."

About the end of May I got another female and a male from Lighthouse Island. The species was evidently bound further north.

62. Painted Bunting. *Emberiza fucata,* Pall.

I procured two males and three females of this pretty species at the end of May, four of which were shot on Lighthouse Island on the 31st of that month.

63. WINTER ORTOLAN. *Emberiza spodocephala*, Pall.

Two males and one female of this also occurred towards the end of May.

In the MS. Illustrations *E. tristrami* is figured under the name San-tao-mei (M. D. 8788, 9945, 7648), or Three-streaked-eyebrow, and *E. chrysophrys* as the Hwang-mei (M. D. 4398, 7648), or Yellow-eyebrow. I procured neither at Chefoo.

64. INTERMEDIATE SKY-LARK. *Alauda cantarella*, Bp.

These were constantly seen in cages; and on one occasion I saw some young birds of this species offered for sale. The Chefoo people put powdered log-wood into their Larks' cages, which gives the birds a peculiar but pretty tinge. I did not observe the true Skylark. This is the common species at Ningpo and Shanghai; but I have one specimen of the true *A. arvensis* also from Shanghai.

65. EASTERN SHORT-TOED LARK. *Alaudula pispoletta* (Pall.).

This Lark was common about Chefoo, breeding on the dry soil of the millet-fields. A female brought to me on the 21st May measured 5·8 inches. Wing 3·3; first, second, and third quills equal and longest, 1·2 short of tail-tip, ·55 longer than tertiaries. Tail 2·3. Bill ·38, from gape ·55. Tarse in front ·74, middle toe and claw ·68, hind toe and claw ·56.

Iris deep brown. Bill brownish white, darker on culmen. Legs and toes flesh-brown; claws brown. Female, on dissection; eggs nearly ready to lay. Belly quite bare.

The birdcatchers called this species the Wo-lan; but how the characters are written I have no means of divining.

A fledged nestling was brought to me at the end of May. It has quite the appearance of a young Sky-Lark. The upper parts, wings, tail, and ear-coverts are deep brown, each feather broadly margined with buff, especially of the wing-coverts; the throat and breast are lighter buff-colour, spotted with brown; the axillaries, belly, and vent pure white. The bill is yellow at the gape, and the legs sandy flesh-colour.

Their eggs were brought to me in plenty. They do not differ materially from those of *A. brachydactyla* (L.).

66. Crested Lark. *Galerida cristata* (L.).

Occurred at the foot of the hills round the Chefoo valley.

Palæornis cyanocephalus, Linn.

A female of this Parakeet was brought to me on the 4th of October. It was caught in the clutches of a Magpie, who was evidently resenting the intrusion of a foreigner; for it had apparently escaped from one of the country ships then in harbour. It had been hurt in its conflict with the "Bird of Joy," and lived only a few hours. As I have noted before, this species has occurred at Canton, in the south of China. I took the following note on its appearance:—

"Bill: upper mandible dull orange-yellow, lower blackish, except on the centre of its base, which is ochreous. Cere greyish brown, with a white border-line in front. Iris narrow and pearl-white. Hood lavender-grey, brighter on the crown. Nape, neck, and underparts, including the axillaries, yellowish green. Back, wing-coverts, and rump a darker green. An oval spot of deep maroon on the lesser wing-coverts. Quills a fine deep green, with black stems and black edges to inner webs; first quill wholly black, with yellowish green outer web. Tail green, with black stems, the two central feathers being blue, with yellow tips. Under tail yellowish, under wing blackish. Legs grey. Wing measuring 5·15 inches.

Parrots of many species are brought to China from the Malaccan Straits. They are indiscriminately called by the Chinese Ying-ko (M. D. 12360, 6434) and Leao-ko (M. D. 7060, 6434), "Hawk's Elder Brother" and "Grackle's Elder Brother."

67. Pied Woodpecker. *Picus mandarinus,* Gould.

The Chuh-muh neas (M. D. 1603, 7800, 7946), or Wood-tapping bird, is common enough about the fine trees near Chefoo. It is much lighter on the underparts, and has the white spots and markings of the upper parts larger and clearer than in the birds at Ningpo.

On the 20th June some country boys brought me a clutch of four nestlings. They were all males, of different ages, varying in extent of red on the crown; the oldest had most red. The red spot on the breast was conspicuous in three of their number. They all had dark irides, not white, as in the adult. They hopped about, climbing the legs of chairs most nimbly, pecked furiously at one another, and cried out lustily "chick-chick."

68. Brown-bellied Pied Woodpecker. *Hypopicus poliopsis*, Swinh.

This species, which I have only noted before near Pekin, was not uncommon about Chefoo. On the 27th August a male of the year was brought to me, and on the 8th September an adult male. Both of these were procured by Mr. Campbell at Lighthouse Island. The gizzard of the adult contained the remains of the caterpillars of moths. The immature bird had the mottled ruby crown of the adult male; but its under parts were much lighter, banded and mottled with black on the under neck and breast. Its bill was lead-coloured, leaf-green at base of lower mandible. Irides deep brown. Legs and nails greenish leaden. The adult male is deeper-coloured on the breast and belly than the Pekin bird, and has a red spot on the centre of the breast, which is wanting in the latter.

69. Grey Woodpecker. *Gecinus canus* (L.).

The Tsao-ta muh-tsze (M.D. 10561, 9687, 7800), or "Scraper and Beater of Wood," of the Chinese, addicted to copses of willows and low trees, is the commonest Woodpecker at Chefoo. I have a female procured on the 12th October, and one male and two female yearlings in the mottled plumage, shot from the same tree by Constable Webster on the 11th July. This species is not found so far south as Shanghai and the Yangtsze plain, where it is replaced by *G. guerini*, Malh., which again, at Foochow and in Formosa, yields to *G. tancolo*, Gould.

70. Eastern Wryneck. *Yunx japonica*, Bp.

I neither saw nor got this bird; but a very good illustration of it is given in the Chinese manuscript of Chefoo ornithology, under the name Shay-ling (M.D. 9136, 7268), or Snake's neck.

71. Cuckoo. *Cuculus canorus*, L.

On several occasions during the month of May I heard the Cuckoo on the hills around Chefoo. I procured a female in the hepatic plumage, and on the 6th June an adult male. The last had one testis swollen large, the other quite small, though also roundish.

72. Bar-tailed Rock-Pigeon. *Columba rupestris*, Bp.

These were breeding in numbers in the holes and caverns of the limestone cliffs of Chefoo Head. Constable Webster pulled out in a boat on the 29th June, and returned with three specimens—a male, a female, and a full-grown yearling. The male had enormous testes, the female yelk-developed ova. The young bird had the cere tumid and dark, instead of flesh-grey, as in the adult, and light pinkish feet, instead of blood-pink.

73. Eastern Turtledove. *Turtur gelastes*, Temm. & Schleg.

Common in all woody places about the port.

74. Summer Dove. *Turtur humilis*, Temm.

Mr. Crasemann had a female of this species in his aviary, procured from a native birdcatcher.

75. Chinese Pheasant. *Phasianus torquatus* (Gmel.).

I was not in season for the Pheasant, and never came across it in my rambles; but I was told that during winter it is brought in numbers to the market.

I may mention that in the MS. illustrations there is the figure of an unknown Pheasant, crested like a "Cheer." Crest and underparts chocolate cream-colour; throat and back black; quills, rump, and neck dingy; central tail-feathers spotted with white. Unfortunately no native name is affixed to the drawing, and I could learn nothing of the species from the Chinese at Chefoo.

A pair is also figured of the Gold Pheasant, *Thaumalia picta* (L.), and marked Kinke, or Golden Fowl.

76. Red-legged Partridge. *Caccabis chukar*, Gray.

Not uncommon on the surrounding hills, where they reside and breed.

77. Red-throated Quail. *Coturnix japonica*, Bp.

On the 4th May, while on an excursion into the country, we met birdcatchers with small white cloth bags on their way to town. They were carrying Quails, which they had just been catching. These little creatures were arriving in the country in large numbers; and many were daily caught and brought to market for sale, both for food and for fighting. The males were distinguished as "the Redthroats," the females as "the Whitethroats."

I was surprised to find the northern Quail such a good species, and so distinguishable in its spring moult from the ordinary bird. Besides their more brilliant plumage, the males have the space before the eyes, the cheeks, and the throat a fine pinkish rust-colour, browner in old birds, with a more or less strong indication of a central black mark on the throat; the females have on the sides of the neck two curved lines of closely set black spots, as in the young male of the common species.

Coturnix vulgaris *japonicus*, T. & S., Faun. Japon. Adult male. Length 6·75. Wing 3·85; first and second quills a little shorter than the third and longest; wing-tip ·9 longer than tertiaries, ·5 short of tail-tip. Tail 1·75, of twelve soft graduated feathers, curved downwards. Tarse ·9, feathered a little in advance of joint; middle toe ·9, its claw ·2. Iris rich sienna brown. Bill yellowish brown on tip and culmen, hazel on rest of upper mandible, blackish grey on lower. Legs and claws light clayey flesh-colour, more or less yellowish. Before the eye, cheeks, and throat rusty brown; centre of throat blackish, with a curved line of the same colour on either side of the patch at its base.

A younger male has the rust-colour less brown, and just an indication only of blackish on the throat. Legs yellower than in the last.

Dissection of the younger bird.—Trachea narrow and uniform. Testes enormous, ·6 by ·4. The darker-throated male is evidently an old bird; for its testes are much larger even than the above.

Female.—Length 6·5. Wing 3·82. Tail 1·50. Tarse ·9; middle toe ·9, its claw ·2. Bill rather paler than in male. Iris hazel.

There is little difference in the measurements of the two sexes, but a good deal in the bulk of body when stripped of skin. When alive they utter low, short, plaintive whistles. In the south the European Quail is the ordinary species brought to market, and some reside all the year, the males assuming in summer the black throat-patch. I have had Quails' eggs brought to me at Amoy. In winter there you occasionally see some with red-speckled throats, which in all probability are migrants from the north. I missed the distinction between the two races, so cannot speak with certainty of their respective ranges; but I believe that in winter they overlap one another, in what latitude of this vast continent I am not informed.

78. Yellow-billed Button-Quail. *Hemipodius maculatus,* Vieill. Gal. des Ois. iv. p. 5, pl. 217.

On the 15th May the birdcatchers brought the first couple of a Button-Quail, which, from their golden bills and red napes, I took to be a species with which I was unacquainted. They called them Hwang-lan; and I found a figure of a pair of the same in the MS. illustrations, under the same name (M.D. 4398, 7173). The couple brought were confined in a small cloth bag, and made small mutterings like young puppies. They were of equal size, though one was more richly coloured than the other. They were both females on dissection, with their ovaries not much developed.

Length 6·75. Wing 3·8, rounded; 1st, 2nd, and 3rd quills nearly equal and longest, 4th a little shorter; ·35 short of tail-tip, ·4 longer than tertiaries. Tail of 8 soft graduated feathers, 1·35 long. Iris cream-white. Bill, legs, toes, and claws fine golden yellow. Inside of mouth flesh-colour. Bill from forehead ·55, from gape ·82, depth at base ·25. Tarse in front ·98; middle toe and claw ·84. Back of neck and a short way down sides of neck deep rich ferruginous. Sides of throat, under neck, and centre of breast ferruginous buff. Centre of throat pale buff. Sides of breast yellowish grey, with a round black spot in the centre of each feather. The trachea had a globular swelling before reaching the bronchi, which latter are extremely short. The plumage of the female is otherwise like that of the bird I procured before in winter at Amoy and Shanghai, and named *H. viciarius* (P. Z. S. 1871, p. 402). The bills of the females at Chefoo were much swollen as well as brightly coloured; so that I felt almost convinced that the northern bird was of a distinct species. But soon the birdcatchers brought males, which were of a good deal smaller size, and showed little normal change. Length 5·75. Wing 3·3, ·2 longer than tertiaries, ·55 short of tail-tip. Tarse in front ·85; middle toe and claw ·83. Bill in front ·45, from gape ·7. Bill brown on upper mandible, lighter on apical third of lower, golden on basal edge of upper, and whole of basal two thirds of lower, including rictus. Iris cream-white. Legs honey-yellow, as in female. The male differs from the female by its smaller size, less bright bill, and in the absence or smaller amount of rust-colour on the back of the neck. Their testes were enormous, evidently on the point of breeding. The trachea was narrower than in the female, and without the circular swelling—another sexual reversion of a male character.

Many of these must have bred in the neighbourhood; but I did not succeed in getting either eggs or young.

On the 6th October I got my last specimen, a female, which Mr. Campbell shot on Lighthouse Island. This had lost all its spring adornments, and was evidently on its southward travel. It was in the plumage of the southern bird.

J. Verreaux identified the Button-Quail sent from Pekin by Père David (which must have been our bird in its summer plumage) with the *H. maculosus*, Temminck.

At the Library of the Zoological Society, with the kind assistance of Mr. F. H. Waterhouse, I referred to the description of that species, from doubtful locality, in Temminck's 'Pig. et

Gall.' iii. p. 631, together with the account and portrait of the same, under the term *H. maculatus,* in Vieillot, Gal. des Ois. iv. p. 5, pl. 217 (1834). The portrait has yellow bill and legs and a red nuchal collar, and certainly seems to represent our species in nuptial dress; but the description gives a smaller bird, and speaks of the sexes as alike. It says that the specimens were brought from New Holland; but we searched Gould's 'Birds of Australia' in vain for such a species. However, we learn from Temminck that three specimens of his bird are in the galleries of the museum at Paris, with which I presume the authorities have compared it; so I suppose we must give M. Verreaux the credit of the identification, and adopt Vieillot's name. Mr. Gould asserted to me that he knew no such bird from Australia.

79. GREAT BUSTARD. *Otis tarda,* L.

On the 2nd May we found a live female Bustard in the market. My companion purchased it for Mr. Crasemann's aviary; but it did not live many days. I met no other.

80. HARTING'S SAND-PLOVER. *Ægialitis placida,* Gray.

A pair of these and a chick are figured in the MS. illustrations. The chick is in down, but is coloured about the face and breast, as the adult in spring, which I think must be a mistake. I did not see the bird at Chefoo. It is simply named in the drawing the Sha-kin or Sand-bird.

81. CHINESE OYSTERCATCHER. *Hæmatopus osculans,* Swinh.

On the 8th May Mr. Campbell, of the Lighthouse, sent me a female Oystercatcher, with the information that it was one of a pair that came to feed on the mud flats of his island when the tide was low. They came from and returned to North Island, a rock some miles to seaward. He promised to look out for its mate.

The bird received was alive, but had its wing badly broken at the shoulder.

Length 19·5. Wing 10·6, reaching ·1 short of tail-tip, 1·5 longer than tertiaries; first quill the longest. Tail 4·65, of

12 rectrices, lateral ·3 short, the rest nearly equal; under tail-coverts ·9 short of tail-tip, upper tail-coverts 1·8 short. Bill from forehead, and rictus, 4 inches. Bare tibia ·8. Tarse 2·2, middle toe and claw 1·68. Legs and feet rose-pink, with flesh-coloured soles and brownish grey claws. Iris blood-red; eyelids and bill bright red orange, or red-lead, with horny yellow tips to latter. Below under eyelid a patch of white feathers, surmounted by a rim of black. White of the body faintly tinged with rose-colour. Its length of bill, and the black spots on the tips of its upper tail-coverts, show as good marks to distinguish this species from its European ally, *H. ostralegus*, L.

On dissection the body was found to contain a large cluster of partly developed eggs, some nearly ready for exclusion. Trachea simple. Proventriculus about 1·4 inch. Stomach long and narrow, 1·6 long by ·7 broad. Epithelium rugose and sticky, containing yellow juice. Intestines 4 feet 3½ inches long; cæca 2½ from anus, 3½ long. No false cæcum, as in the *Scolopaces*.

On the 15th of May Mr. Campbell sent me the male. It was at Talienwan of the promontory on the opposite side of the Gulf of Pechelee that I found this species before, during the breeding-season (see 'Ibis,' 1861, p. 261).

Mr. Campbell, as I have before noted, observed that his pair of Oystercatchers came from North Rock, to which they returned when they had finished feeding on the mud flats of Kung Kungtan. Constable Webster visited the Rock on the 22nd of June. He found this small uninhabited island had a narrow grassy plateau on the top of its rocks facing the land. Near the edge of this he noticed several pairs, and in some cases triplets, of eggs lying each set in a depressed spot without nest of any kind. No bird was near them. He counted six or seven such sets. The first egg he took up burst in his hand, and he found it putrid; he picked up another from another depression; and on finding it fresh when he purposely broke it, he brought its fellow for me, together with four more of what seemed to him to be freshest. He then looked about for the proprietors; and seeing no birds on the top of the rock, he went down and shot a Shag out of a flock which he thought might possibly be the owners of the eggs. The Shag was a *Phalacrocorax pelagicus,* Pall., and is remarked on under its proper head. It, of course, had nothing to do with the egg-trove. Of the five eggs brought to me one only was fresh, the others all more or less bad. Three are of the same ground-colour as the lower egg figured in Hewitson's 'Eggs of British Birds,' under *Hæmatopus ostralegus* (ii. p. 305); the other two are rather darker than the upper figure; and they are all spotted with dark brown and grey: but the dark spots are more scattered and lighter in shade. No streaks occur. In shape the eggs are more elongate than the figures, measuring in length about 2·5 inches by 1·4 in greatest breadth. It is pretty clear that one pair of Oystercatchers were the parents of the whole dozen or so of eggs that Mr. Campbell found. What could have induced the female to lay eggs and then desert them? Could she have been constrained by the instinct that is said to impel the Ostrich thus to provide maggots by the attracting putridity of the abandoned eggs for the first food of her own favoured hatchlings, which, when first born, are too weak to travel far in search of them?

I learn from Hewitson (*l. c.* ii. p. 306) that the European Oystercatcher does make some kind of nest for its eggs, but from Gould ('Birds of Australia,' ii. p. 216) that the Australian *H. longirostris* does not. The affinity of our intermediate species in this respect, as in that of form and colour, is consequently more for its Australian ally.

82. WOODCOCK. *Scolopax rusticola,* L.

On the 30th April we bought a live bird of this species in the Chefoo market.

83. SPRING-SNIPE. *Gallinago megala,* Swinh.

I got a single specimen of this also at the same time and place as the last.

84. PINTAIL SNIPE. *Gallinago horsfieldi* (Gray).

On the 4th May I bought from some birdcatchers in the

"Bois de Boulogne" a Snipe of this species that they had just caught.

85. Diminutive Curlew. *Numenius minutus,* Gould.

While strolling along the path on the top of the cliffs near our house, I observed a small Curlew on an earthy mound in the grass, under the wall of the old Consulate enclosure. As we drew near it flew off, uttering a loud "teo, teo," somewhat like the notes of a Greenshank, but with a little of the Curlew wail in it. It flew round about, and perched near again, until again disturbed. It must have found something palatable in that spot.

86. Whimbrel. *Numenius phæopus* (L.)

On the 22nd May Mr. W. R. Carles went out for a ramble on the hillsides and brought back three Whimbrels. He found a small flock of them in a field of dry grass.

87. Common Heron. *Ardea cinerea,* L.

Constable Webster shot two birds of the year of this Heron on the 29th September.

88. White Heron. *Egretta modesta* (Gray).

The constable got at the same time and place three adults of this species; they were already in winter form, with yellow bills.

89. Bittern. *Botaurus stellaris,* L.

A male of this was sent me by Mr. Campbell from Lighthouse Island on the 6th October. Its bill was light brown, deep on culmen; cere tinged with greenish yellow; skin round eye the same. Iris straw-yellow. Legs and toes yellowish green, browner on nails, with their tips light; pectination on middle claw very narrow. A small brown Gadfly about its head.

90. Von Schrenck's Little Bittern. *Ardetta eurhythma,* Swinh.

In 'The Ibis' for 1873, p. 73, was published my detection of this species at Ningpo. It was breeding there and at Shanghai. On the 20th May, and for many days after, the birdcatchers brought live specimens of both sexes. I took the following notes on fresh birds, the sexes of which I determined by dissection:—

Male, with enormous testes. Total length 14 inches. Wing 5·88, first quill ·25 shorter than the second, which is the longest, and ·1 longer than the third; wing extending to tail-tip. Tail 1·15. Tibia, bare for ·75. Tarse 1·98 long; middle toe 2, its claw ·37. Legs and toes grass-green, yellow near the tarso-tibial joint and on the under surface of the tarse. Soles clay-coloured, claws light yellowish brown. Bill from forehead 1·95, from gape 2·47; depth at base ·57. Bill blackish brown on culmen, yellowish brown on the rest, darker on sides of upper mandible near tomia, light on sides of lower and on gonys. Cere and bare skins round eye purplish flesh-colour, tinged with green. Iris straw-yellow.

Female.—Eggs largely developed, nearly ready for emission. Length 12 inches; wing 5·45; bill in front 1·95, from gape 2·42; depth at base ·5; tibia, bare for ·5; tarse 1·75; middle toe and claw 2·17. Bill blackish brown on culmen and along terminal edge of lower mandible, light yellowish grey on rest; yellow on cere and base of lower mandible; skin round eye greenish yellow; iris yellow; legs and toes green, yellower on tibial joint; soles light clay-colour; claws light brown. *Plumage spotted like that of the immature bird.*

On the 21st a bird in the male dress proved on dissection to be a female; and on the 22nd one in female dress turned out to be a male. There was no difference in the swollen state of their sexual organs from those of normal birds. From the number of adult females I examined, there can be no doubt that the immature dress is the full feminine costume; and that an occasional female, probably well advanced in years, should affect the male plumage is a very ordinary circumstance amongst birds. But what means the adult male in immature dress? I presume that males require two years to acquire their full plumage, and breed in their first year.

The Little Bitterns that were brought alive had generally their wings twisted and their legs tied, so that they could not stand; but they were then very fierce, uttering loud croaking cries, and striking savagely with their bills. They pecked at each other with much force, drawing blood at almost every stroke. The last specimen was brought on the 5th June. After that date I saw no more; and I think they must have passed on to breed in more genial places across the Gulf of Pechelee, as there were no suitable localities about Chefoo. The spotted female of this species is twice figured in the MS. Illustrations. The first time it is called Yay-pao (M. D. 11982, 8245), or "Wild Security;" the second time Shan tsao Ke (M. D. 9087, 10541, 5315), or "Hill-grass Fowl." I know no other Bittern of which the sexes have different plumages.

91. Cock of the Reeds. *Gallicrex cristata* (Lath.).

Two males of this were brought me, one on the 20th May, and the last on the 14th June. Both were, as to their organs, in breeding-form; and yet both were in more or less immature plumage. In fact it certainly is the exception in this species to find the male at breeding-time in full nuptial dress. It is figured in the MS. Illustrations as the Hung-kwan (M. D. 4168, 6658), or "Red-cap." The Coot, *Fulica atra*, is the figure on the next page, and is called Tsang-kwan (M. D. 10497, 6658), or "Greenish-cap," with this note in Chinese characters:—"Can float on the water, has palms."

92. Water-Hen. *Gallinula chloropus* (L.).

On the 31st May a native brought a fine spring male of the common Water-Hen. It had a red eye, rich red on the crest, and at the base of the bill, and a red garter to its yellowish green leg.

93. Red-breasted Crake. *Porzana erythrothorax*, Temm. & Schleg.

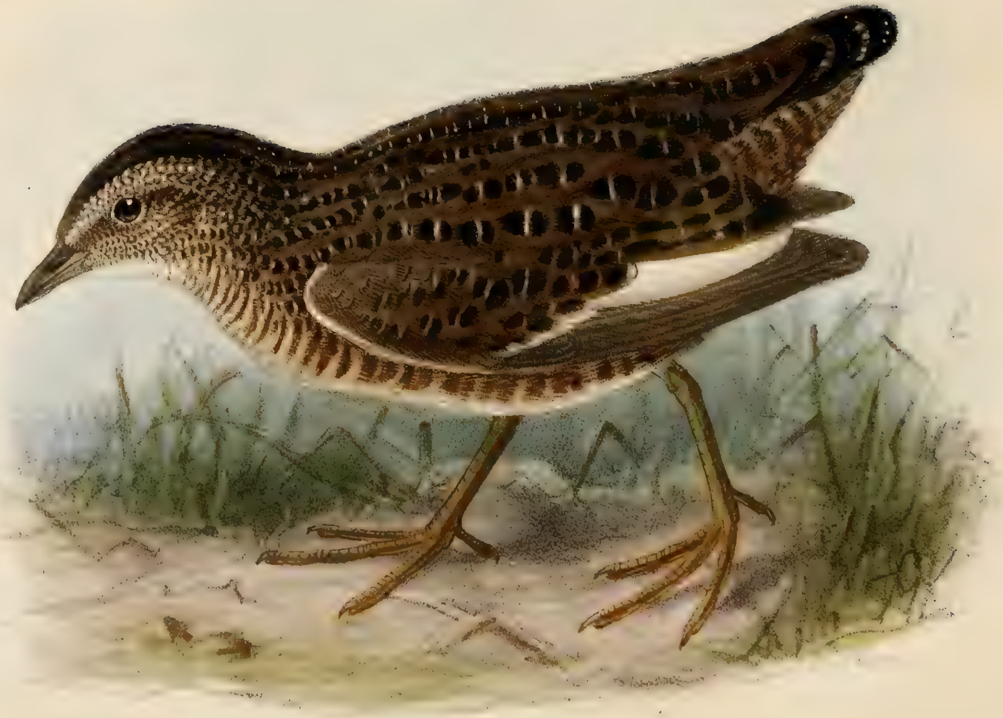
A male of this Rail was brought by the birdcatchers in May, together with several *Rallidæ*, in whose company it had been captured. The specimen still retains a white chin.

94. Baillon's Crake. *Porzana pygmæa* (Naum.).

On the 19th the birdcatchers brought me the first of this little Rail; and on the 22nd Mr. Carles shot another. Both were males, with well-developed testes; both had their throats

AMERICAN MUSEUM
CENTRAL PARK,
NEW YORK.
OF NATURAL HISTORY.

Ibis 1875 Pl III



J.G.Keulemans lith.

M & N Hanhart imp.

PORZANA EXQUISITA.

still white, and the underparts not completely moulted. It is figured in the MS. Illustrations as the Tsing-tsuy (M. D. 10978, 11209), or " Green-bill."

95. Button-Crake. *Porzana* (*Coturnicops*) *exquisita,* sp. nov. (Plate III.)

In company with the last this pretty little novelty was brought. It is a complete miniature of the American *C. noveboracensis,* as will be seen from a glance at the accompanying plate.

Bill short, deep brown, greenish yellow on lower mandible at base and on rictus; legs and feet light flesh-brown, dark on joints and claws; iris brown. Length 5 inches; wing 3, ·4 longer than tertiaries, ·25 short of tail-tip, first quill ·45 shorter than the second and longest; bill in front ·48, from gape ·55; tibia bare only just above the joint; tarsi ·78, middle toe and claw 1·08; tail about 1·2, composed of apparently only six soft feathers, entirely covered by the upper and lower tail-coverts, and hard to distinguish. The two primaries of the wing light hair-brown, the first pure white on the outer web; the seven secondaries white on their apical two thirds, light brown on the basal third; the first mottled with brown on the white. *Female on dissection.*

I saw no more of these till the 12th October, when Mr. Michie was out for a stroll on the bank of a river beyond the " Bois de Boulogne." He walked through some coarse tangled grass, in which several of these were ensconced. They were hard to flush, and when on the wing flew awkwardly and badly. He succeeded in securing three, two of which were not too much injured to have preserved. They are male and female, and apparently birds of the year. The female is like the one above described, but has the upper parts more washed with yellowish olive, her underparts more mottled, and less white on the quills of her wings. The male is much like her, but is much smaller, has even less white on his wings, and has his underparts much less mottled.

96. Red-necked fasciated Rail. *Rallina mandarina,* Swinh.

My knowledge of this handsome bird was based on one shot by Mr. Bligh on the Canton river in company with one of *Porzana erythrothorax,* T. & S. (see P. Z. S. 1871, p. 415). I never met with the species myself at Amoy or elsewhere. At the end of May and beginning of June it was quite a common species at Chefoo. The birdcatchers brought many; and Mr. Campbell found it constantly occurring at Lighthouse Island.

Adult male.—Bill bluish grey, blackish on culmen and about tip, pea-green about base; inside of mouth flesh-colour; iris crimson, eyelid red; legs and toes salmon-colour, brownish on under surface of tarse, on the toes and on their soles. Tibia bare for ·8 inch; tarsi 1·6; middle toe and claw 1·75; bill in front 1, to gape 1·12, depth at base ·48. Total length 9·25; wing 5, ·5 longer than tertiaries, ·8 from tip of tail; first quill 1 in. shorter than the second and third, which are equal and the longest; tail 2, rounded, of ten softish feathers, outer rectrix ·4 the shortest; under tail-coverts ·1 short of tail-tip, upper tail-coverts ·8 short of same.

A second male is smaller, has shorter toes, and many more white bands and markings on its lesser wing-coverts. Testes large and swollen. Females and junior males are smaller in their proportions, have white throats and white wavy marks on the upper wing-coverts. In old males the throat is as red as the breast, and the wing-coverts have few white marks. The living birds in the cage uttered suppressed notes sounding like "block, block." On the 4th October I procured a bird of the year, which possibly was bred in our neighbourhood.

Immature.—Bill light purplish flesh-colour, deep brown on culmen, and greenish on base of both mandibles; inside of mouth pale flesh-colour; iris kidney-brown; legs purplish brown, upper parts olive-brown; upper wing-coverts tipped with black and white bars; throat white; sides of neck, breast, and sides of belly cream-buff, the rest whitish, obscurely barred on breast, but deeply and distinctly on belly, flanks, and axillaries, with blackish; tail coloured like the back.

97. Spectacled Teal. *Eunetta formosa* (Georgi).

A live male of this handsome Teal was procured for me by a friend from some Chinese near Chefoo; and I presented it to Mr. Crasemann for his aviary. No ducks or other wild fowl were offered in the market while we were at Chefoo; but I was told that in winter they are brought in great number and variety. In the MS. Illustrations *Casarca rutila* (L.) is figured as the Hwang-ya (M. D. 4398, 11831), or "Yellow Duck," and *Aix galericulata* (L.) as the Lung-tow-ya (M. D. 7402, 10366, 11831), or "Dragon-headed Duck," though its more classical Chinese name is Yuen-yang (M. D. 12520, 11895). The Common Teal is also figured, but bears no Chinese name; and there is the figure of a Duck called Kiang-ya (M. D. 5500, 11831), or "River-Duck," which puzzles me. I dotted down the following note of its appearance:—"A Duck with brown head, blue neck, white breast and back, green speculum, falcated tertiaries, dark tail, and brown-spotted belly."

98. Cormorant. *Phalacrocorax carbo* (L.).

Cormorants were common enough about the rocks of the Chefoo coast. On the 29th June Constable Webster found a family of young birds on the bluff rocks of Chefoo Head. He shot one; it was a large bird covered with black down, except on the wings and tail, which were still in blue quill just expanding at their tips; its throat-skin was yellowish, and its iris apparently yellowish brown; its legs and toes were black. The Constable visited the same cliffs on the 6th July, and procured another of the same family. It fell from the top of the cliffs into the sea below, about 80 feet. Its wings were grown, and all its down had given place to feathers—this in nine days. The eyes were bluish grey. He also got the female parent, which had bluish green irides, and the greater part of the head white. She proved a female on dissection, and was apparently the mother of the nest. The native name for Cormorant is Loo-sze (M. D. 7338, 11285).

99. Resplendent Shag. *Phalacrocorax pelagicus* (Pall.). This was *the* Shag at Chefoo, as it seems to be also at Hakodadi, North Japan (see 'Ibis,' 1874, p. 164). Constable Webster shot one out of a small party on the 22nd June off North Rock. It turned out to be a male with a double crest, as in *P. bicristatus*, but not fully developed, and had only a few white feathers on the thighs. One or two longish white feathers also occur on the neck. Inside of mouth yellowish red. Bare skin round eye, at base of bill, and on intercrura of lower mandible wrinkled and dark tile- or Indian red. Sides of lower mandible near base marked with same. Bill blackish brown. Legs and toes black. Length 29 inches. Wing 11, ·1 longer than the tertiaries, 6·5 short of tail-tip. Tail 6·7, of twelve stiff graduated feathers, laterals 2·5 short of centrals. Tip of bill to gape 3·1. Tarse 2. Fourth toe and claw 4. The testes were about ·75 long by ·4 broad, and the stomach empty.

100. Large Common Gull. *Larus niveus*, Pall. Many of these were about on our first arrival at Chefoo, but they passed away.

101. Black-tailed Gull. *Larus crassirostris*, Vieill. These remained in flocks the summer through, resorting to the beach, where they washed and sunned themselves.

Constable Webster attended one of these gatherings on the morning of the 3rd July, and brought back eleven specimens, all in full plumage, except one, which still retained immature feathers. One adult had one hind toe wanting its nail, another had lost half a leg. There were two sizes, the larger proving males, the lesser females. The sexes of course did not differ in plumage.

Adult male (♂ on dissection).—Length 20 inches. Wing 15, first quill slightly longer than second, and longest. Tail 6, of twelve even feathers, outermost white, except on bit of stem and bit of edge of inner web. Iris yellowish cream-colour, black on outer circle. Eyelids vermilion. Two thirds of bill bright greenish yellow, with red-orange rictus and inside of mouth; apical third black, with vermilion tips and patches to sides. Legs and toes fine greenish yellow, greyish at joints, and greyish horn on nails. Bill from forehead 2·1, from gape 2·92, depth at base ·72. Bare portion of tibia ·9. Tarse 2·2. Middle toe and claw 2·05. Wing-tip extending 2·5 beyond tail-tip, and 4·5 beyond tertiaries.

Adult female (♀ on dissection).—Length 17·50 inches. Wing 13·75, 2 beyond tail-tip, 4 beyond tertiaries. Bill 2, from gape 2·6. Tibia same as in male. Tarse 2. Middle toe and claw 1·75. Tail 5.25.

Individuals of either sex vary in length of toes, and in their greenness and yellowness of legs and feet. One male and one female of six specimens are advanced towards breeding. The other four are very backward.

The custom's cruiser 'Feihoo' put into Chefoo after visiting the Shantung promontory, whither she had gone to arrange for the erection of a lighthouse. Mr. Kirkwood, her second officer, presented me with three eggs of a Gull, taken by himself and party from nests on the adjoining island, called "Alcestie."

Mr. E. V. Brennan, chief officer of the 'Feihoo,' who was one of the landing-party, gave me the following particulars about the eggs :—"Alcestie island," he said, "was covered with Gulls, and their nests were numerous, many containing young covered with greyish down, without any white on them. There were also many with eggs; but all the eggs nearly that they took had been more or less sat upon. Each nest contained either two eggs or two young birds. He did not see any with more. The nests were small, being about 9 or 10 inches in entire diameter, with little outer rim, consisting of flattish saucers, composed of straw and dried grass picked off the land, with no seaweed or feathers. He recognized my specimens of *L. crassirostris* as being of the same species. His visit to the island was on the 10th of June. The eggs were taken each from a separate nest. The Gulls were very daring in the protection of their property, rising above him and pouncing down at his head. The three eggs all bear a strong resemblance to the lower figure of the plate opposite p. 495 of Hewitson, being that of *L. canus*. Ours, however, are more strictly ovate, and average 2·5 by 1·75.

102. Large Herring-Gull. *Larus occidentalis,* Aud.

A live bird of this species was brought to me on the 14th June. It was in full adult plumage. Its wing had been hurt, and was bleeding. The natives called it Hai-mao, the name also applied to Gulls in the south.

103. Ivory Gull. *Larus eburneus,* Gm.

As we were leaving Chefoo on the 20th October to embark on board the southward-bound steamer, a white Gull hovered over our boat. I took it to be of this species. The morning was cloudy, with gusts of wind.

104. Flesh-billed Black Albatros. *Diomedea derogata,* Swinh. P. Z. S. 1873, p. 785.

On the occurrance of a Black Albatross at Chefoo in June, and my reasons for considering it a good species I must refer my readers to the P. Z. S. of 1873. Capt. Blakiston procured the same species in July at Hakodadi (see 'Ibis,' 1874, p. 165).

VIII.—*Letters, Announcements, &c.*

The following letters, addressed "To the Editor of 'The Ibis,'" have been received:—

Sir,—In again going over my Algerian note-books I find some slight errors require to be rectified and additions made to my paper (containing an account of nearly all the birds I positively identified) which was contributed to 'The Ibis,' and appeared in the volume for 1871.

Page 78. "Cinclus aquaticus, Bechst.," should be Cinclus albicollis (Vieill.).

Page 79, species 36, Dromolæa leucopygia should be united with No. 37, *D. leucocephala,* the opinion I expressed as to their being very near akin having been more than confirmed by subsequent researches.

43. Saxicola homochroa should stand as Saxicola erythræa (Ehr.). *S. halophila* (Tristram).

I only shot one specimen, a female, on the 31st of April, at Berrȳan, in the Mzab.

59. Sylvia hortensis.

"Only one shot" Add "in the oasis at Gardaia, April 26th, 1870."

63. Sylvia conspicillata.

"Tibrem" Add "and Laghouat."

72. Anthus arboreus.

"Common in summer" is a slip of the pen for "Common in spring."

71. Anthus campestris.

I procured specimens at Guelt el Stel, and Ain Oosera, which is Sahara in every sense of the word; but I cannot say I shot any further south. Guelt el Stel must be nearly 150 miles from the sea-coast.

80. Calandrella brachydactyla.

"Once seen at Laghouat" should be "One shot at Laghouat, May 4th, 1870.

86. Galerida abyssinica.

A female at Tibrem, on the 3rd of May, was the only one I shot.

87. Page 290, two lines from the bottom, for "*Galerida abyssinica*" is found in the hills, read "*Galerida cristata.*"

95. Passer salicicola.

For "ten near Blida" read "two near Blida."

104. Pica mauritanica.

This Magpie was seen at Tibrem and Medea. The Algerian Jay I only saw in cages. I find my meaning has been slightly misunderstood here.

123. Œdicnemus crepitans.

"In the Algiers market about the end of February" should be "about the 5th of February."

135. Crex pratensis.

"I found one about the end of February" should be "on the 3rd of February."

138. Anas clypeata.

"In the market at Algiers" should be "In the markets at Algiers and Oran."

The five following species may, I think, be added to my list:—

Budytes cinereocapilla (Savi).

I shot a bright-coloured cock at Laghouat, with white throat, dark ear-coverts, and no white line from eye to beak. It was consorting with *B. flava* (L.), of which, no doubt, it is a mere variety.

Ardea purpurea, L. Purple Heron.

I saw one in a shop at Algiers in May, recently set up.

Larus leucophæus. Yellow-legged Herring-Gull.

Several in the harbour at Algiers. As I was leaving they came so near to the steamer as to leave no doubt in my mind of their being Herring-Gulls of some sort.

Puffinus cinereus. Cinereous Shearwater.

Soon after leaving the roadstead these appeared, and continued (if I remember rightly) to the Balearic Isles, where we also saw some Stormy Petrels.

Cursorius gallicus. Cream-coloured Courser.

I saw this bird, as I firmly believe, in the Tibrem country, running and flying before the heads of our mules.

J. H. Gurney, Jun.

Northrepps Hall, Norwich,
October 1874.

Futtehgurh, N. W. P.,
Sept. 29th, 1874.

Sir,—At page 140 of 'Nests and Eggs,' Mr. Hume, though quoting a portion of my account of the breeding of *Eudynamys honorata*[*], makes some statements in connexion with the parasitical habits of this Cuckoo which are at variance with my observations. Having paid "*much attention*" [italics are mine] to "*their habits during the breeding-season,*" he states that he has "*never seen Crows feeding*

[*] *Cf.* Ibis for 1873, p. 74.

fully-fledged Coëls out of the nest," whereas he has "*repeatedly watched adult female Coëls feeding young ones of their own species.*" Mr. Hume must surely mean the very reverse of what he has written.

On the 1st of the present month I had occasion to drive into Mynpoony, where I put up with my friend Mr. Parcelli, with whom Messrs. Sprenger and Brown were staying at the time. After breakfast I observed a pair of Crows feeding two young Coëls (during the journey I saw the same thing frequently), in different trees, within ten paces of the house; and the gentlemen I have mentioned, whose attention I drew to the matter (in connexion with Mr. Hume's version), noticed the same thing. I asked for a loaf of bread, and then for a gun, as the opportunity was too good to be lost. A few minutes later I held a *post-mortem*—to prove, I hope, for the satisfaction of Mr. Hume, that the stomach of the Coël (*which is always fed by its own parents*!) contained, in fact, a part of the gizzard of the very Fowl we must have eaten grilled for breakfast, garbage of various sorts, including small feathers, and, lastly, pieces of the very bread we had been throwing to the Crows!!

I will not take upon myself to affirm that the young Coël is *never* fed by its own parents; but I should like to have some better evidence regarding this feature in the economy of this Cuckoo, as a *constancy*, than has been adduced by Mr. Hume.

Yours &c.,

ANDREW ANDERSON.

---

33 Carlyle Square, S.W.
Nov. 21, 1874.

SIR,—With reference to the birds of Hakodadi, a suspicion crossed my mind that possibly I had made a mistake in identifying the Wren from Hakodadi with the *Troglodytes fumigatus*, Temm., of Nagasaki, and that while the latter might be the Wren of Southern Japan, the northern bird might be distinct, and identical with *T. alascensis*, Baird. To clear the doubt I sent a skin to Dr. G. Schlegel, and begged him to get me in exchange from his father, of the Leiden Museum, a specimen of genuine *T. fumigatus.* His reply I have unfortunately mislaid; but it was to the purport that the museum had no duplicate to spare, but that my bird, which he and his father had carefully compared with the type specimens, was identically the same. We must therefore conclude that *T. alascensis,* Baird, is a synonym of *T. fumigatus,* Temm.

M. Taczanowski, of Warsaw, writes about the Chinese Buntings, as follows:—"Dans votre liste des oiseaux de Chine je trouve une confusion dans deux espèces d'*Emberiza. E. cioides,* Natterer (=*E. cia,* Pall.), est identique à votre *E. castaneiceps,* c'est le même oiseau de Schrenck et de Radde; tandis que votre *E. giglioli* estce que je trouve aussi en Sibérie, et qui ressemble le plus à l'*E. cia,* L., et diffère de l'*E. cioides,* T. et S.=*ciopsis,* Bp. Il est possible que cette dernière se trouve aussi en Chine, mais on ne l'a pas encore trouvée en Sibérie. L'oiseau que je tiens pour votre *E. giglioli* a les stries sur la tête rousses au lieu des noires de *cia,* et le cendré de la poitrine beaucoup plus riche et bleuâtre, et beaucoup plus avancé sur le ventre. Outre Dybowski personne ne l'a pas encore observé en Sibérie."

I would ask permission to make a few remarks in reply to Mr. W. E. Brooks's letter in the last 'Ibis' (p. 461). I was reporting what I considered a discovery, viz. that *Phyllopneuste schwartzi,* Radde, was identical with *Abrornis armandi,* Milne-Edw. I did not suppose that any one interested would accept my determination without study of the original descriptions. I will not shrink from saying that though I had no need to refer to Mr. Tristram's identification, in my mind I rejected it. I saw the specimen referred to by Mr. Tristram. It was marked as coming from Lake Baikal, and was certainly a *P. viridanus,* Blyth; but what I maintain is, that it was not a *P. schwarzi,* Radde. I may add that I am also in a position to show that *Calamodyta maacki,* Schrenck, is not a race of *Phylloscopus fuscatus,* Blyth, but a Reedbird identical with my *C. bistrigiceps* (P. Z. S. 1863, p. 293) (see Ibis, April, 1874, p. 154). The original blame for these wrong identifications is attributable to the persons through whose hands the specimens came. At the same time we can rectify such mistakes by a reference to the text of the describers; and perhaps Mr. Tristram is to blame for not having done this before announcing his identification to the public.

I am yours, &c.,

Robert Swinhoe.

P.S. I must not pass by Mr. Brooks's note on the Hakodadi Creeper without attention. I have not a specimen from Cashmere to compare with; but our bird certainly does not tally with the description of *Certhia hodgsoni* (J. A. S. B. 1872, p. 74).

1. Our bird has a shorter bill than English specimens, though lighter in colour.
2. Agrees with *C. hodgsoni*, Brooks, under this head.
3. The North-China bird is much less rufescent than an English or a Dutch (Leyden) specimen.
4. The brown of the quills and tail is of a much lighter hue, and the underparts are *snow*-white.

I have a specimen from Pekin, one from Hakodadi (North Japan), and one from Amoorland. They are all of the same light boreal race, and, in my opinion, not separable from *C. familiaris*, any more than the Kamtchatka Greater and Least Woodpeckers are from *Picus major* and *Picus minor* of Europe. Père David proposed to separate the Pekin bird as *Certhia fasciata* (Cat. des Ois. à Pékin); but I never saw sufficient reason for such a proceeding. I would draw Mr. Brooks's attention to the remarks on the variation of this far-ranging species by Mr. H. E. Dresser in his excellent 'Birds of Europe,' now in process of publication.

R. S.

---

33 Carlyle Square, S.W.
Dec. 19, 1874.

Sir,—I have a few more lines for insertion in the forthcoming 'Ibis,' for which I would crave your indulgence.

In my paper "On Birds from Hakodadi," published in your April number of this year, I state (p. 155) that the "Scaly-headed Grass-Wren" is not a *Tribura*, though I leave it under that genus, not knowing how to place it.

I was on the point of proposing a genus for it in the P. Z. S., and giving an illustration to show the peculiarity of its form; but on carefully looking over Jerdon's 'Birds of India,' ii. p. 161, I find it may well be included in Hodgson's genus *Horornis*. I therefore suggest that my Chinese species may now stand as *Horornis squameiceps*.

M. Taczanowski has written to me from Warsaw, under date 9th Nov., that he has received from Ussuri an important collection of birds, which contains many species that have not been before received from that neighbourhood. Among the varieties he enumerates "un petit oiseau que je n'ai pas pu déterminer, c'est un *Sylvide* semblable aux *Troglodytes*." From this description I recognized at once our little Wren; and this it proved to be when the specimen reached me. It is a male, shot on the 25th Sept. I have it from Canton, Formosa, Hakodadi, and now from Mantchuria, which, I think, proves pretty well that it is a regular migrant species, coming north in summer to breed.

M. Taczanowski reports that the same collection contains:—

"(1) *Emberiza quinquelineata*, David [an MS. name=my *E. tristrami*, P. Z. S. 1870, p. 441].

"(2) *Turdus pelios*, Bp., mâle magnifique, différent en plusieurs détails de la femelle précédente, mentionnée par Cabanis dans le Journal d'Ornithologie.

"(3) *Limonidromus indicus* (Gm.).

"(4) *Orœcetes gularis*, Swinh.

"(5) *Eophona personata* (Temm.), mais la femelle ressemble complétement au mâle, et non pas comme le dit Temminck dans sa description.

"(6) *Cyanoptila cyanomelæna* (Temm.)."

I am yours, &c.,

Robert Swinhoe.

Dresden, Dec. 15th, 1874.
R. Natural-History Museum.

Sir,—In the last number of your Journal (1874, pp. 416–420), Dr. Sclater gives a short account of the contents of my ornithological papers in the 'Sitzungsberichte' of the Imperial Academy of Sciences of Vienna for 1874. Dr. Sclater concludes with the "fifth memoir (read June 18, 1874)." As I published *six* memoirs in the 'Sitzungsberichte' (as Dr. Sclater himself remarks on page 416), I beg leave briefly to point out to the readers of 'The Ibis' the contents of this sixth memoir (read July 16, 1874).

Rhipidura rufidorsa, from New Guinea and Jobi (allied to *R. dryas*, Gould), and *Rhipidura kordensis*, from Mysore, are described as two new species, as well as *Myzomela cruentata*, from the Arfak mountains, and *Myzomela rubrobrunnea*, from Mysore; some specimens of a *Myzomela*, from New Guinea, are provisionally registered as *M. erythrocephala*, Gould. *Ptilotis pyrrhosis* is a new species from Jobi; and *Ptilotis megarhyncha*, Gray, is proved to be a young *Ptilotis rostrata*, Wallace; then follow some remarks on *Xanthotis chrysotis* (Less.) and allied forms. *Tropidorhynchus gilolensis*, Temm., *Anthochæra senex*, Gray, and *Melitograis striata*, Sundevall, are shown to be identical; a *Tropidorhynchus* from New Guinea is provisionally determined as *Tropidorhynchus inornatus*, Gr. & Mitch., likewise another bird provisionally as *Gliriphila modesta*, Gray. *Cosmetira eques* (Lesson) varies considerably in size and coloration. *Mimeta striata* (A. & G.) has a black bill when young, a red one only when full-grown. The sexual differences occurring in the different species of *Dendrochelidon*, especially in *Dendrochelidon mystacea* (Less.), are then discussed. The paper concludes with detailed remarks on the following Parrots (pp. 21–39):—*Pionias pucherani* (Bp.) et stirpes; *Trichoglossus cyanogrammus*, Wagler; *Domicella lori* (L.) et stirpes [*D. lori* (L.), *D. lori jobiensis*, n. var., *D. cyanauchen* (Müller)], *D. cyanogenys* (Bp.), *D. fuscata* (Blyth), and *D. scintillata* (Temm.). In a note the correct spelling of the names "Mafoor" and "Mysore" is spoken of.

The continuation of my ornithological "Mittheilungen" upon my acquisitions from New-Guinea has been delayed by my change of residence to Dresden; but I hope soon to be able to continue it. Not two thirds of my specimens have been thoroughly looked through. I shall then give additional remarks on some species already dealt with, such as *Rectes nigrescens, Ælurœdus arfakianus,* and others.

I am yours, &c.,

Adolf Bernhard Meyer.

Sir,—In the P. Z. S. April 21, 1874 (p. 212, pl. xxxv.), a species of Woodpecker, obtained by Lieutenant R. Wardlaw Ramsay near Tonghoo, in British Burmah, was described as new, under the title of *Gecinus erythropygius.*

Somewhat later (P. A. S. B. May 1874, p. 106) the same species appears to have been described by Mr. Hume under the title of *Gecinus nigrigenis,* and again (Str. F. ii. p. 444).

The species, however, seems identical with *Gecinus erythropygius,* D. G. Elliot (N. Archiv. 1865, p. 76, pl. iii.), founded on an example (♀) obtained in Cochin China by M. Germain.

Yours,

Walden.

Dec. 1874.

Having far exceeded our prescribed limits, we regret to be obliged to defer all notices of recent ornithological works and papers, as well as other announcements, till our next number.

THE IBIS.

THIRD SERIES.

No. XVIII. APRIL 1875.

IX.—*Notes on the* Trochilidæ. *The Genera* Chlorostilbon *and* Panychlora. By D. G. Elliot, F.L.S. &c.

Of all the known genera of Birds I doubt if there is one whose species ornithologists have found more difficult and perplexing than those treated of in this paper. The reason appears to be, that the variation in colour of the plumage, together with that of size in the body and its members, has greatly assisted such Trochilidists as were desirous of describing new species, and who, with perhaps only one specimen upon which to found an opinion, were easily contented to employ these variations as sufficiently characterizing new forms, even though they were frequently infinitesimal in degree. In the articles upon the various species given in this paper, I endeavour to show how little dependence can be placed upon the different tints and shades of colour as indicating specific value; and the tables of measurements of a large number of examples from various localities exhibit clearly that size alone is not to be relied upon. I can find recognizable characters for only eleven species; and I do not see any cause for believing that there are more. Of some described species, however, I have not seen the types—such as *C. euchloris* (Reich.), the description of which does not enable me to form a satisfactory opinion as to its validity, while the figure in his 'Troch.' p. 180, sp. 412, is too poor to be of any service. I can distinguish three groups or sections among the species of the genus *Chlorostilbon* as usually restricted, as follows:—those which have the bill all black; those with the bill with basal half of mandible flesh-colour, the rest black; and those with the bill all flesh-colour, excepting the point, which is black. I cannot perceive any character sufficient to separate such species as *C. auriceps* and *C. caniveti*, generically, from *C. angustipennis*, and have therefore not employed the term *Chlorolampis* proposed by Cabanis for the former birds. The genus *Panychlora* has but one section, the species being distinguished from *Chlorostilbon* by having green tails, with the outer rectrices more or less pointed. The males of the species of these two genera may be distinguished as follows:—

Chlorostilbon.

A. Bill black.	
a. Tail moderately long, forked	1. *C. angustipennis.*
b. Tail short, scalloped	2. *C. atala.*
c. Tail short, slightly rounded, almost square	3. *C. prasinus.*
B. Bill black, with the basal half of the lower mandible flesh-colour	4. *C. hæberlini.*
C. Bill flesh-colour, point only brownish black.	
a. Rectrices entirely bluish black.	
a'. Lower part of breast and abdomen green, tail moderately forked	5. *C. pucherani.*
b'. Lower part of breast and abdomen golden red, tail moderately forked	6. *C. splendidus.*
b. Rectrices tipped with grey.	
a'. Tail long, deeply forked, rectrices very narrow	7. *C. auriceps.*
b'. Tail moderate, forked, rectrices rather broad	8. *C. caniveti.*

Panychlora.

A. Tail shining grass-green; bill long	1. *P. poortmani.*
B. Tail very dark green, bill moderately long	2. *P. aliciæ.*
C. Tail bright green, outer rectrices extremely narrow and pointed	3. *P. stenura.*

It may be as well here to point out what appears to be the geographical distribution of the above acknowledged species. Mexico seems to be the most northern point in which any species of the two genera containing the green Humming-birds is found. Here we meet with *C. auriceps,* the exact locality of which is not known, and *C. caniveti.* The last is common in the neighbourhood of Oaxaca and Jalapa, and extends its range southwards through Guatemala to Costa Rica. In Veragua the last-named species is replaced by *C. angustipennis,* which is common in Panama, Columbia, and Ecuador, and, under different names, is the species commonly received from those countries. The island of Trinidad supplies the small bird named *atala* by Lesson, distinguished from *prasinus,* Lesson, in having a tail slightly scalloped, but not forked, in contradistinction to the almost square tail of *prasinus.* This last-named species appears to be distributed throughout Venezuela and the western portion of the Amazonian region into Peru, from which country Hauxwell has sent a number of specimens from the vicinity of Pebas, it having also been obtained in other localities by different collectors. One specimen of *C. hæberlini* is before me as coming from Panama, collected by McLeannan. This is the furthest point north and west that it appears to go: and I am somewhat inclined to look upon it as a straggler there; for the habitat of the species appears to be Venezuela and Columbia, in the neighbourhood of Cartagena; it is also frequently sent in collections from Bogota. Bolivia possesses *C. splendidus,* which extends in a southerly direction into Chili east of the Andes, where it has been obtained at Mendoza, thence across the continent to Buenos Ayres, where it is not uncommon. Northward of this, throughout South-eastern Brazil, as our present knowledge enables us to determine, is the range of the allied species *C. pucherani.* It will thus be seen that, with the exception of those portions of Ecuador, Peru, Bolivia, and Chili which lie west of the Andes, and also Patagonia, from none of which localities am I aware that any examples have been received, the green Humming-birds are generally distributed from Mexico, throughout Central America, over almost the entire portion of South America. The habitats of the various species appear tolerably well defined, and do not, as a rule, encroach upon each other.

Before commencing the review of the species separately, I will here say a word about the colour of the plumage. In all birds whose feathers are metallic, there is more or less variation to be observed in the colours they reflect; and while, happily, in the majority of cases the hues are generally the same, so as to enable naturalists to determine and recognize a species, yet it not infrequently happens that specimens of the same species exhibit different shades of the same colour, or else, as in the case of the green Humming-birds, exhibit a tendency to clothe themselves in feathers of a more or less red or coppery tint in the places that should properly show only a purely brilliant green. Amongst no class of feathered creatures, perhaps, is this change more observable than among the Trochilidæ, and in no group of that great family more than in the members of the genus *Chlorostilbon*. Sometimes the plumage reflects, in place of green, golden hues of different degrees of intensity; and it is not uncommon to find some individuals of a species possessing brilliant metallic crowns, while those of others are either dull green, or else show only a very slight brilliancy. It is this changeableness of colour in their plumage, together with their variableness in size, both of the body and its members, that has given rise to so much confusion in this group, and to the descriptions of specimens that have really no specific value, and which, when seriously investigated, with ample materials, we are obliged to eject from a position they improperly occupy, and consign them to that ever-growing *bête noire* of all naturalists, the synonymical dust-bin. Alas that there is no legalized dustman to cart it away and all its contents! Having examined, with one or two exceptions, all the known species of this genus, I have given at the head of this paper an analytical table, by which, in spite of the difficulties just mentioned, all the species, here acknowledged as such, can be recognized without any great difficulty; but if variations in size or tint of plumage are to be considered sufficient in themselves alone to give a specific value, then at once an opportunity is afforded for some new Brehm to flood our publications with descriptions of new species, and greatly add to whatever confusion may already exist; for the members of no genus of birds afford more ample materials (in the variations above mentioned) for establishing separate forms with microscopical differences than do the variable individuals composing this genus.

Chlorostilbon angustipennis.

Trochilus angustipennis, Fraser, P. Z. S. 1840, p. 18.

Chlorostilbon angustipennis, Gould, Mon. Troch. vol. v. pl. 353; id. Intr. Troch. p. 175, sp. 397.

Trochilus chrysogaster, Bourc. Rev. Zool. 1843, p. 101.

Chlorolampis chrysogaster, Cab. & Heine, Mus. Hein. Th. iii. p. 47, sp. 104 (1860).

Trochilus phæopygus, Tsch. Faun. Peruana, p. 247, sp. 11.

Prasitis phæopyga, Cab. & Heine, Mus. Hein. p. 49, sp. 108 (1860).

Chlorostilbon assimilis, Lawr. Ann. N. Y. Lyc. Nat. Hist. p. 292 (1860).

Chlorostilbon melanorhynchus, Gould, P. Z. S. 1860, p. 308.

Chlorostilbon smaragdina, Cab. & Heine, Mus. Hein. p. 48, sp. 106 (1860).

Chlorostilbon pumilus, Gould, Ann. & Mag. Nat. Hist. 1872, ix. p. 195.

Hab. Veragua (*Arcé*); Panama (*McLeannan, Hughes*); Venezuela; Columbia (*Salmon*); Ecuador (*Fraser, Buckley*).

Perhaps no species among this difficult group has given more trouble to ornithologists than the one now under review; and the causes appear to be the inability of investigators to get together a sufficiently large series to enable them to see how greatly individuals vary from each other, and how little worthy of reliance there is in a difference of size, in either bill, wings, or tail, to justify specimens occupying a distinct specific rank. The species was first described, from a specimen from Bogota, by Fraser, in the ‘Proceedings’ of the Zoological Society, as above cited. A few years later Bourcier redescribed it as *T. chrysogaster*, from Cartagena in Columbia. Mr. Gould had these two types in his hands when writing his monograph of the family, and there states that, "of one thing I am certain, namely that the *angustipennis* of Fraser, and the *chrysogaster* of Bourcier, are one and the same bird; for I have the types of both now before me, and they do not differ in the slightest degree." And in this decision he was undoubtedly correct. In 1860 Mr. Gould describes another specimen of this species, from Ecuador, as *C. melanorhynchus*; but in his 'Introduction,' issued in the following year, he states that he believes this to be the same as *chrysogaster*, Bourcier. Just before this, however, he reverses his decision as regards *angustipennis*, Fraser, and *chrysogaster*, Bourc., being identical, and states he then believes them to be distinct, although unfortunately he does not give the reason which induced him to undertake this change of base. In 1860 Mr. Lawrence described a specimen from Panama as *C. assimilis* (compared with *melanorhynchus*, Gould, and stated to be smaller); and in 1872 Mr. Gould described one from Citado, in Ecuador, as *C. pumilus*.

These appear to be the prominent names given to this species; and all of them have been more or less employed by ornithologists to designate some one specimen or another of the green Humming-birds with a black bill and tail, as they were able to interpret the various descriptions given by different authors. One point that appears to have had the most influence upon describers is the size of their examples, either in the length of the bill (generally deemed very important), or length of wing, or tail, and sometimes the amount of *fork* exhibited by the feathers of the latter. Probably the differences have often been the result of age, as regards the bill, or the plumage not having arrived at a complete state, as regards the wing and tail, more especially the latter. With but a limited number of specimens to judge from, and (as would be the natural result) the unconsciousness of the variation shown among individuals in measurements equally with the colouring of their plumage, a naturalist would be most apt to consider that his examples belonged to more than one species. Or if specimens exhibiting the extremes of the species as regards size are shown, it then also appears difficult to one who has never investigated the subject with sufficient material, to believe that they only represent one and the same species. To show how very greatly individuals of this species do vary among themselves, I have selected thirty-one of the specimens now before me, and given the measurements of the bill, wing, tail, and amount of bifurcation observable in the latter. These birds represent nearly every locality in which the species is known to have been obtained. I might here mention that the specimen described by Mr. Gould as *C. melanorhynchus* is chiefly deemed distinct from its large size. The table will show what reliance is to be placed on this as a specific character. The smallest specimen is from Panama, and measures respectively ·60, 1·84, 1·20, and ·30 in the order given for all the examples. Next in size to this comes one from the Volcano of Chiriqui, in Veragua, and measures ·64, 1·80, 1·40, ·35, thus showing a somewhat larger size, excepting the wing, which is ·04 of an inch shorter. Nos. 3 and 4, both from Panama, have bills of equal length and ·01 of an inch longer than No. 2. No. 4's wing is of equal length with No. 2, but that of No. 3 is ·10 inch shorter than that of No. 2, and ·14 inch shorter than that of No. 1. The tail of No. 3 is imperfect; but that of No. 4 is ·04 inch shorter than that of No. 1, and ·24 inch shorter than that of No. 2! No. 5 comes from Veragua, same collector as that of No. 1, and exhibits a bill ·06 inch longer than that specimen, and a shorter wing and longer tail. No. 6 comes from Popayan, with a bill only ·01 inch longer than the last, but with both a shorter wing and tail, although not so short a wing as No. 3. Nos. 7, 8, and 9, coming respectively from Columbia, Venezuela, and Panama, have bills of equal length. Wings of Nos. 7 and 8 are equal; but that of No. 9 is ·10 inch longer. No. 10, also from Panama, while having a bill ·01 inch longer than the last specimen, has the wing ·03, and the tail ·16, and the bifurcation ·20 greater. Nos. 11 to 19 inclusive, from Panama, Veragua, and Ecuador respectively, have bills of equal length, viz. ·70; the length of wing, however, varies from 1·70 to 1·86, and that of the tail from 1·16 to 1·45. Nos. 20, 21, and 22 have also bills of equal length, ·71, only ·01 inch longer than the nine preceding ones; the wings, however, vary to the extent of ·09 inch, and the tails ·16 inch. The gradual increase in length of bill continues in Nos. 23 and 24, being ·72 and ·74 inch, from Ecuador and Veragua, while the wing of the latter specimen is ·06 inch shorter than the Ecuador specimen, which reaches 1·90 (with but one exception, the longest of all those of the examples measured). Nos. 25, 26, and 27 show equal bills of slightly increased length, being ·75 inch, ·01 longer than No. 24. The wings and tails also vary, ·10 and ·23 inch respectively, no two of the former being of equal length. Nos. 28 and 29 are females from Ecuador, with bills of ·76 and ·79 inch, and wings 1·85 and 1·91 inch, the last being the longest of all the specimens in the list; but the tails are quite short, viz. 1·21 and 1·24 inch; but this was to be expected from their sex. No. 30, also a female, from the Rio Napo, has the bill ·80 inch in length, ·01 inch longer than No. 29; but the wing is ·01 inch shorter than in that specimen, while the tail, again, is ·03 inch longer. The last specimen is a young male from Bogota, with a bill of equal length with the last, but the wing and tail ·24 inch and ·12 inch shorter respectively.

	Length of bill along gape.	Wing.	Tail.	Fork of tail.
1. Panama	·60	1·84	1·20	·30
2. Chiriqui, Veragua	·64	1·80	1·40	·35
3. Panama	·65	1·70	imperfect.	
4. "	·65	1·80	1·16	·30
5. Veragua	·66	1·80	1·35	·40
6. Popayan	·67	1·75	1·31	·37
7. Medellin, Columbia	·68	1·75	1·41	·35
8. Pallatanga	·68	1·75	1·18	·24
9. Panama	·68	1·85	1·27	·30
10. "	·69	1·88	1·43	·50
11. "	·70	1·86	1·40	·40
12. "	·70	1·83	1·45	·35
13. "	·70	1·79	1·31	·41
14. "	·70	1·86	1·37	·43
15. "	·70	1·85	1·19	·28

	Length of bill along gape.	Wing.	Tail.	Fork of tail.
16. Veragua	·70	1·70	1·30	·35
17. ,,	·70	1·85	1·36	·36
18. Ecuador	·70	1·82	1·19	·20
19. ,, (type of *pumilus*)	·70	1·74	1·16	·25
20. Veragua	·71	1·80	1·28	·28
21. ,,	·71	1·80	1·32	·30
22. Medellin, Columbia	·71	1·89	1·16	
23. Ecuador	·72	1·90	1·26	·25
24. Veragua	·74	1·84	1·30	·40
25. Venezuela	·75	1·73	1·46	·36
26. Ecuador	·75	1·83	1·23	·22
27. ,,	·75	1·80	1·23	·40
28. ,, ♀	·76	1·85	1·24	
29. ,, ♀	·79	1·91	1·21	
30. Rio Napo, ♀	·80	1·90	1·24	
31. Bogota, juv. ♂	·80	1·66	1·12	

It is thus seen that with a tolerably large series of specimens a gradual increase of length of bill is obtainable, from the shortest up to the very longest; and I have no doubt that additional specimens would give an uninterrupted scale, and complete the gradations in the list here published. In no instance, however, do the wings and tail together of any two specimens exactly agree in their measurements, although occasionally one or other is found to measure the same as that of some other specimen. It would seem therefore to be pretty satisfactorily established that size in these birds, by itself, is of no specific value whatever, and that the various specimens described as distinct, chiefly upon their difference of measurements, must become synonyms of the *C. angustipennis* of Fraser.

If it could be shown, however, that all the specimens from any one locality presented a difference in size, either greater or less, as the case might be, but nevertheless constant, it might then perhaps be necessary to consider whether they should be deemed geographical races; but what are the results shown by the table? The bird with the smallest bill comes from Panama, viz. ·60 inch; but a specimen, also from Panama—in fact, several have bills ·70 (·10 of an inch longer).

The next smallest comes from Veragua, ·64; but Veragua also furnishes one with a bill of ·74. Ecuador gives specimens of ·70, as Panama does, and also one of ·79, nearly ·10 of an inch longer. Columbia produces examples with bills of ·68, being among those of very small dimensions, and one of ·80, the longest of the whole series. It will, then, be clearly seen that neither the short nor the long bill is characteristic of specimens coming from any particular locality, but that the two extremes are not unfrequently to be met with in the same place; and thus there are no grounds whatever left to cause us to believe that the length of the bill, or wing, or tail, has any specific value.

Besides the names which I have already mentioned as the prominent ones given to this species, there are probably one or two more which will have also to become synonyms of *angustipennis,* Fraser. One of them is the *Chlorostilbon smaragdina* of Cabanis & Heine. I have not seen the specimen on which this name was founded, and therefore cannot state with certainty what it may be; but, from my general knowledge of this species, I consider that the description was taken from a specimen of *angustipennis*; for I have one greatly answering it, an example coming from the same country (Venezuela), and which is undoubtedly Fraser's species. The authors state their bird is like *C. chrysogaster,* but a little smaller, tail scarcely forked, above and below shining green without any golden hue*. My table shows how little reliance can be placed on the size and amount of bifurcation of the tail; while the large series of specimens before me exhibit all variations of colour, from all green with dull crowns to brilliant crowns and bodies reflecting all shades of gold in the midst of the green. I feel therefore that I probably shall not widely err if I place Messrs. Cabanis and Heine's name among the synonyms of *angustipennis.* In his 'Fauna Peruana,' Tschudi describes what I believe to be a young male of this species as *Trochilus phæopygus,* the colour beneath, greyish white, not being found in any adult male of any of the species belonging to this group, while it does comprise a large portion of the plumage of young males. I have therefore placed the name among the synonyms.

---

* "Simillima *C. chrysogastræ,* sed paulo minor, cauda vix furcata, supra subtusque nitore virescente minus aurato. Long. tot. 3′, al. 7‴, caud. 1‴, rostr. culm. 7‴."

The following is a list of the specimens I have examined :—

Volcano of Chiriqui, 1 (*Arcé*), Veragua, 5 (*Arcé*), Mus. S. & G. Veragua, 2 (*Arcé*), Mus. D. G. E. Isthmus of Panama, 1 (*Hughes*), Mus. P. L. S.; 4 (*McLeannan*), 2 (*Hughes*), Mus. S. & G.; 5 (*Arcé*), Mus. D. G. E. Columbia, Popayan, 1 (*Bourc.*), Mus. D. G. E.; Medellin, 3 (*Salmon*), Mus. S. & G. Venezuela, 1 (*Spence*), Mus. P. L. S. Ecuador, Pallatanga, 1 (*Fraser*), Mus. P. L. S.; 1 (*McLeannan*), 2 (*ex Higgins*), Mus. S. & G.; 5 (*Buckley*), Rio Napo, 1 (*ex Whitely*), Mus. D. G. E.; Citado, 1 (*Buckley*), type of *C. pumilus*, Mus. J. Gould.

CHLOROSTILBON ATALA.

Ornismya atala, Lesson, Hist. Nat. Troch. p. 118, pl. 42.

Chlorostilbon atala, Gould, Mon. Troch. v. pl. 356; id. Intr. Troch. p. 177, sp. 403.

Chlorostilbon caribæus, Lawr. Ann. N. Y. Lyc. Nat. Hist. vol. x. p. 2?

Hab. Trinidad (*Boucard*); Curaçoa (*Lawrence*).

This species appears to be a native of Trinidad, and may possibly be found upon the mainland; but of this I am not quite sure, as I have not seen any thoroughly authenticated specimens from the continent. It is very closely allied to *C. prasinus*, Less., but may be distinguished by possessing a scalloped tail, which that species has not. Individuals, however, vary slightly in the amount of the bifurcation, which in no case is of any considerable extent. Mr. Gould places Lesson's name with two marks of interrogation, but uses it nevertheless. Why there should be any doubt about it, is not so easy to explain, because Lesson's description is very clear, and his plate answers well to it, with the exception of the under tail-coverts having been left white, an evident omission of the colourist, the only white mentioned in the description being that of the anal region, a character common to all the species of this group. If with a larger series of specimens it should be found that the bifurcation gradually disappears in various localities, then *atala* of Lesson would run into *prasinus*, Less., as there is no other character by which they can be separated, the slight difference in the shades of bluish green or greenish blue being of no specific value whatever.

I have placed, with a ?, Mr. Lawrence's *C. caribæus*, from Curaçoa, described in the tenth volume of the 'Annals of the Lyceum of Natural History of New York,' as a synonym of this species. I have not seen the type, and therefore cannot speak with certainty in regard to its specific value; but as his description agrees with specimens of *C. atala* before me, and as he apparently founds his species upon a variation of colour only, which by itself has no specific value in this group of birds, I think it probable that his name is a synonym of *C. atala*. Unfortunately no mention is made of the *shape* of the tail, whether *square* or *forked*, which *is* of specific importance*.

The only specimens I have seen are:—

Trinidad, 3 (*Boucard*), Mus. D. G. E.

CHLOROSTILBON HÆBERLINI.

Chlorostilbon hæberlini, Licht. Mus. Berl.; Cab. & Heine, Mus. Hein. Th. iii. p. 48, footnote (1860).

Chlorestes hæberlini, Reich. Aufz. Colibr. p. 7 (1853); id. Troch. Enum. p. 4, t. 703. f. 4578–80.

Chlorostilbon hæberlini, Gould, Intr. Troch. p. 175, sp. 398.

Chlorostilbon nitens, Lawr. Ann. Lyc. Nat. Hist. N.Y. 1861, p. 305; Gould, Intr. Troch. p. 179, sp. 410.

Hab. Panama (*McLeannan*); Columbia (*Wyatt*); Venezuela.

This species, coming from Panama, Columbia, and Venezuela, and to which it appears that Prof. Reichenbach first allotted the name of *hæberlini*, is distinguishable from all the other members of this genus by having the basal half of the mandible red in life, the remaining portion, as well as the maxilla, being black. Specimens vary, like those of other species of *Chlorostilbon*, in the shades of green possessed in their plumage; and some have brilliant crowns. It is to these individuals that Mr. Lawrence has given the name of *nitens*, as above cited. His specimen came from Venezuela; but as I have a specimen from the same country with a green crown, like the majority of those from Columbia, I do not deem this of sufficient importance to constitute a species, especially as in all other respects the examples are alike. I have therefore placed Mr. Lawrence's name as a synonym of *hæberlini*. This species has been compared with *C. chrysogaster*, Bourc., both by Cabanis and Lawrence, under the different names employed by them, as being a little smaller; but neither of them in his comparison speaks of the mandible having the basal half red, which is really the only character that is at all trustworthy, by which the species may be recognized. Specimens from Columbia and Venezuela are not to be distinguished from each other, with which also those brought by Mr. Wyatt from near Cartagena (the locality of the type of *hæberlini*) fully agree.

---

* Since the above was written I have seen Mr. Lawrence's type of *C. caribæus* in his collection, and am convinced it should be referred to *C. atala*.

The specimens examined by me are:—

Columbia, 1 (*Leadbeater*), Herradura, 1 (*Wyatt*), Mus. P. L. S.; Bucaramanga, 2 (*Wyatt*), Ocaña, 1 (*Wyatt*), Lion-Hill Station, Panama, 1 (*McLeannan*), Mus. S.&G.; Santa Marta, 1, Venezuela, 1 (*ex Gould*), Bogota, 3 (*ex Whitely*), Columbia, 2 (*ex Boucard*), Mus. D. G. E.

CHLOROSTILBON PUCHERANI.

Trochilus pucherani, Bourc. & Muls. Rev. Zool. 1848, p. 271, juv. ♂.

Trochilus nitidissimus, Licht. Mus. Berol.; Cab. & Heine, Mus. Hein. Th. iii. p. 47, sp. 103 (1860).

Trochilus lamprus, Natter. Mus. Monac. (testibus Cab. & Heine et von Pelz.).

Chlorostilbon prasinus, Gould, Mon. Troch. v. pl. 355; id. Intr. Troch. p. 176, sp. 401.

Chlorostilbon igneus, Gould, Intr. Troch. p. 176, sp. 402 (red var.).

Hylocharis flavifrons (Gm.), von Pelz. Ornith. Brasil. p. 33 (1871).

Trochilus similis, Bourc. MS.

Hylocharis similis, Bp. Consp. i. p. 74.

Hab. South-eastern Brazil (*Rogers*, *Natterer*, *Youds*).

This species was first described by Bourcier and Mulsant in the 'Revue Zoologique' for 1848; but for some unaccountable reason Mr. Gould substituted for it the name of *prasinus*, given by Lesson to an entirely different bird. The colouring of the bill alone should have been amply sufficient to prevent the two from ever being confounded, as *prasinus* has a black bill, while the present one has a red bill in life, that fades after death to a pale yellow, leaving only the tip black, when the bird is adult. The *Chlorostilbon igneus* of Gould is a ruddy variety of the present species, which beautiful style is not unfrequently met with among the green Humming-birds. The bird called *Hylocharis flavifrons* (Gm.) by Von Pelzeln is this species, as I determined from specimens sent to me by H. von Pelzeln from the Vienna Museum. I published this in 'The Ibis' for 1874, p. 89, but there referred the bird to *C. prasinus*, intending by that name to indicate the present species. It must now read, "equal to *C. pucherani*, Bourc." I find that this species varies very greatly in the length of the bill among individuals, the two extremes before me being, measured along the gape, ·66 and ·83 inch; but between these are all the intermediate lengths, so that I have no choice but to regard the difference as being of no specific value. The colours vary also about the head and breast; but all have a green abdomen and flanks, in contradistinction to its near ally, *C. splendidus*, Vieill., from the more southern part of the continent, which appears there to replace the present species. I have before me the type of *C. similis*, Bourcier, procured by me from M. Bourcier himself. It cannot in any way be separated from *C. pucherani*, with which, so far as I can see, it is identical in every respect. The type is that of a fully adult highly plumaged male.

The specimens I have examined are:—

Brazil, 1 (*Sallé*), 1 (*Bourcier*), 1 (*Bourcier*) [type of *C. similis*], 1 (*ex Gould*); Santa Fé, Minas Geraes, 1 (*Rogers*), 1 (*ex Gould*), 2 (*ex Boucard*), 1 (*ex Whitely*), Rio Janeiro, 1 (*Bourcier*), like *C. igneus*, Gould, Ypanema, 1 (*Natterer*), called *Hylocharis flavifrons* by Von Pelz., Mus. D. G. E. 1 (*Verreaux*), Mus. P. L. S.; Santa Fé, Minas Geraes, 1 (*Rogers*), Rio Janeiro, 1 (*Youds*), Mus. S. & G.

CHLOROSTILBON PRASINUS.

The All Green Humming bird, Edwards, Gleanings (1764), p. 316, pl. A 360, fig. 1.

L'Orvert, Buffon, Pl. Enlum. tom. vii. pl. 13 (text only).

Ornismya prasina (*l'Orvert*), Less. Hist. Nat. Ois. Mouch. p. 188, pl. 65.

Prasitis prasina, Cab. & Heine, Mus. Hein. Th. iii. (1861) p. 49, sp. 107.

Trochilus daphne, Bourc.?

Chlorostilbon peruanus, Gould, Intr. Troch. (1861), p. 177, sp. 405.

Chloristilbon napensis, Gould, Intr. Troch. (1861), p. 177, sp. 406.

Chlorostilbon brevicaudatus, Gould, Intr. Troch. (1861), p. 178, sp. 407.

Argytria media, Pelz. Orn. Brasil. p. 29.

Argytria meliphila, Pelz. Orn. Brasil. p. 29.

Argytria phœbe, Lesson & Delattre, Rev. Zool. 1839, p. 17, juv.?

Hab. Venezuela; Cayenne (*fide Boucard, Verreaux*); Amazonian region, Peru (*Hauxwell*).

Although I have stated that perhaps no species has given more trouble to ornithologists than the *C. angustipennis,* I may perhaps make an exception in favour of the species now under consideration; and I think that the above list of synonyms will bear out the truth of my assertion, and sufficiently show how diverse have been the opinions of naturalists when considering the proper appellation to be given to their specimens. The history of the species appears to be as follows; and it is the more important that it should be traced from its source, because an entirely different species from the one described as *prasinus* by Lesson has of late years been allowed to usurp that name, and thus the majority of ornithologists have been misled. Edwards, in his 'Gleanings,' figured and described a little green Humming-bird with a *black* bill and *rounded* tail, two very important characters in the history of this bird. Buffon, as quoted above, describes this bird as *l'Orvert,* and refers to Edwards's plate and description, and also speaks of the tail not being forked and not extending beyond the wings, in fact, quite short. Next comes Lesson, in his 'Histoire Naturelle des Oiseaux-Mouches,' and gives to the "*Orvert*" of Buffon the name of *Ornismya prasina*, and also describes the *black* bill, rounded tail, and wings as long as the tail. Lesson's figure of the species is easily recognizable. It is thus established beyond a doubt that the *prasina* of Lesson is a *black-billed* bird with a slightly rounded tail, and the wings as long as that member. This description answers perfectly for the bird we are accustomed to receive from Cayenne, the Amazonian region, and Eastern Peru; and the figure published by Lesson enables us to feel assured that our determination of his *prasina* is correct. Bourcier, in his MS., designated a bird from Peru with a wash of blue on the throat *Trochilus daphne*; and in his 'Introduction to the Trochilidæ, Mr. Gould adopted this name, and further subdivided the species into three more, under the names of *peruanus*, *napensis*, and *brevicaudatus*, founding them upon a more or less amount of blue on the throat, and a very slight variation in the shape of the tail. Neither of these characters appears to be of sufficient importance to warrant a specific distinction, as they are not constant; that is to say, among individuals the quantity of blue on the throat and the extent of difference of shape in the tail are found to vary, the differences, after all, being very slight, although it might be that some would be inclined to regard the extremes as different species. The *C. brevicaudatus* answers perfectly for the description of *prasinus*, Lesson, and has very little blue observable upon the throat; this is followed by the style called *napensis*, with more blue, and this succeeded by *peruanus*, to be followed by *daphne*, which has the throat and some of the breast washed with blue. In 1839 Lesson described a young bird as *Ornismya phœbe*; and this, from the difficulty of ascertaining by the description what species it really was, has been avoided by ornithologists, and Mr. Gould placed it in his 'Introduction' as among the undetermined species. Attached to the type of *C. peruanus*, kindly lent to me by Mr. Gould, and which he obtained from M. Bourcier, is a label upon which, in Bourcier's handwriting, is the following:—"*T. phœbe.* Je n'ai pas publié cette espèce à bec noir venant du Pérou, parceque *Lesson a déjà donné ce nom.*" Having no doubt that Bourcier had compared this specimen with Lesson's type to have enabled him to arrive at this conclusion, I have no hesitation in placing Lesson's name of *phœbe* among the synonyms of *prasinus,* Less. In any case, if Bourcier's identification is correct, Mr. Gould's name of *peruanus* would have to sink into a synonym. *C. prasinus,* then, is a species easily recognized by its short nearly square tail and long wings, reaching to the end of the rectrices. The *Argytria media,* Pelz., and *C. meliphila,* Pelz., I have ascertained, from the examination of the types, to be this species (*vide* Ibis, 1874, p. 263).

The specimens I have examined are as follows:—

Cayenne: 1 (*ex Verreaux*), Mus. P. L. S.; 1, Mus. S. & G.; 1 (*ex Gould*), 1 (*ex Boucard*), Mus. D. G. E. Ecuador: 1 (*ex Whitely*), Mus. D. G. E. Peru: 1 (*Hauxwell*), 1 (*Lerch*), Mus. D. G. E.; 2 (*Hauxwell*), Mus. S. & G.; 1, type of *daphne,* Bourc., 1, type of *peruanus,* Gould, Mus. J. Gould.

CHLORISTILBON SPLENDIDUS.

Trochilus splendidus, Vieill. Nouv. Dict. d'Hist. Nat. tom. vii. p. 361 (1817); id. Enc. Méth. p. 563 (1823).

Trochilus phaethon, Bourc. Rev. Zool. 1848, p. 274.

Chlorestes phaethon, Reich. Enum. Trochil. p. 4, pl. 755, figs. 4734, 4735.

Chlorostilbon bicolor, Cab. & Heine, Mus. Hein. Th. iii. p. 46, sp. 102 (1860).

Chlorostilbon phaethon, Gould, Mon. Troch. v. pl. 354; id. Intr. Troch. p. 175, sp. 399.

Trochilus flavifrons, Gould, Voy. Beagle, Birds, p. 110.

Ornismya aureiventris, D'Orb. & Lafresn. Syn. Av. p. 28.

Chlorostilbon aureiventris, Gould, Intr. Troch. p. 176, sp. 400.

Hab. Buenos Ayres (*Verreaux*) to Mendoza (*Weisshaupt*), across the southern part of the continent; Bolivia (*D'Orbigny*).

Much confusion has always existed in regard to the proper appellation that should be given to the green Humming-bird coming from the more southern part of South America, with its underparts reflecting a brilliant golden hue, in contradistinction to the green of the other portion of the body. Some authors consider that the name of *bicolor,* bestowed by Gmelin upon the *Saphir-émeraude* of Buffon (Pl. Enlum. vol. vii. p. 21), is the right one; and as this would take precedence over others, it is as well to look first upon what grounds the supposition is based. Buffon says of his bird that "un *bleu de saphir* éclatant couvre la *tête et la gorge,*" which certainly applies to no species of *Chlorostilbon.* Gmelin's brief description is "*Tr.* smaragdino-aureus, *capite gulaque cyaneis,*" agreeing, as far as it goes, with Buffon's. Lesson, in his 'Histoire Naturelle des Oiseaux-Mouches,' in his description, although he refers his bird to that of Buffon, does not say that it has a *blue head,* but that frequently blue reflections are observable, and that the "mandibule supérieure est *entièrement noire* et l'inférieure se trouve être jaunâtre, excepté la pointe, qui est brune." Now that will not answer at all for the bird under consideration, which has the *entire bill* red or flesh-colour, the point alone being brownish black. As Lesson makes no mention of a white throat, his bird cannot be the *Hylocharis sappharina,* as some suppose. I think, from the descriptions given by these authors just named, as well as that of Vieillot, published under the name of *T. bicolor,* in the Nouv. Dict. vol. vii. p. 373, and in the Ency. Méth. p. 571, that the species known as *Thalurania wagleri* was intended, which has a blue head and throat, and which also answers to much of the rest of those authors' descriptions, particularly of the bill; but there is no *Chlorostilbon* known, that I am acquainted with, which possesses the colours of head and body and bill necessary to enable it to receive the name of *bicolor,* as indicated by the authors whose works have just been mentioned. In 1817 Vieillot described the *Masbello* of Azara, from Paraguay, as *Trochilus splendidus;* and his description and the locality of the specimens leave no doubt that the bird afterwards named *phaethon* by Bourcier is intended.

Vieillot says "*le bec incarnat,* et à pointe noire," and that all the plumage, with the exception of the throat, the front of the neck, the tail, and a white spot on the belly, is a shining golden green. I know of no other species of Humming-bird from the locality given by Vieillot which could possibly answer to his description; and I see no reason whatever that should cause ornithologists to hesitate in accepting his name as having prior claim to the bird afterwards named *phaethon* by Bourcier.

Chlorostilbon splendidus is closely allied to *C. pucherani*; but, besides being much larger, it has always the belly and lower parts a brilliant golden hue, with the exception of the narrow white line observable in the anal region of all adult males belonging to the species of this genus. This colouring is constant; and united with its larger size, the two together appear to indicate a specific distinction between the birds. Like other species of *Chlorostilbon,* the bills vary greatly among individuals, and those of two now lying before me, one from Bolivia, the other from Mendoza, measure from the gape ·94 and ·80 inch respectively, while a second specimen from Mendoza, from same locality as the last, and collected by the same person, viz. Weisshaupt, has a bill ·85 inch in length. This would seem to show how untrustworthy the size of the bill is on which to establish a species in this group. A small race of this form has been called *aureiventris* by D'Orbigny and Lafresnaye. Three specimens are now before me. In colour of plumage they are precisely like the larger specimen, but have a shorter wing, it measuring 1·80 as compared with 2·09 inches in my largest specimen; but others vary between these, as, for instance, one from Chuquisaca (*ex Gould*) has a wing 2·03 inches, another from Mendoza, 1·93 inch; and it would be easy, with a large number of specimens, to fill up all the intermediate dimensions, as I have shown can be done (in my table) in the case of *C. angustipennis.*

Specimens examined:—

Brazil? 1 (*Leadbeater*), Bolivia 1 (*Leadbeater*), Mus. P. L. S.; Mendoza 1 (*Weisshaupt*), Mus. S. & G.; Chuquisaca, Peru, 1 (*ex Gould*), Mendoza 2 (*Weisshaupt*), Chili 1 (*ex Verreaux*), Buenos Ayres 3 (*ex Verreaux*), Bolivia? 1 (*ex Boucard*), Bolivia 1 (*ex Cook*), Mus. D. G. E.; these last two are the style called *aureiventris*.

CHLOROSTILBON AURICEPS.

Trochilus auriceps, Gould, in Jard. Contr. Orn. 1852, p. 137.

Chlorostilbon auriceps, Gould, Mon. Troch. v. pl. 350.

Chlorolampis auriceps, Gould, Intr. Troch. p. 174, sp. 393.

Hab. North-west Mexico.

This pretty species is remarkable for its narrow and greatly lengthened outer rectrices, which extend beyond those next to them ·55 inch, and by which alone it can be separated from *C. caniveti.* In size and general colour of plumage the two species are as nearly alike as can be; and specimens of *caniveti* possess as brilliantly coloured crowns as any that can be found in *auriceps*, thus reducing the distinctive character of its name to *nil.* The exact locality in which the species dwells is not yet known to us; for it is still quite rare in collections.

Specimens examined:—

Mexico 2 (*ex Gould*), Mus. S. & G.; Mexico 1 (*ex Gould*), Mexico 1 (*Bourcier*), Mus. D. G. E.

CHLORISTILBON CANIVETI.

Ornismya caniveti, Less. Supp. Ois.-Mouches, pp. 174, 177, pls. 37, 38.

Chlorostilbon caniveti, Gould, Mon. Troch. v. pl. 351.

Chlorolampis caniveti, Gould, Intr. Troch. p. 174, sp. 394; Cab. & Heine, Mus. Hein. Th. iii. p. 47, footnote (1860).

Chlorostilbon osberti, Gould, P. Z. S. 1860, p. 309; id. Mon. Troch. v. pl. 352.

Chlorolampis osberti, Gould, Intr. Troch. p. 174, sp. 395.

Chlorolampis salvini, Cab. & Heine, Mus. Hein. Th. iii. (1860) p. 48, sp. 105; Gould, Intr. Troch. p. 174, sp. 396.

Hab. Mexico (*Sallé*), Guatemala (*Salvin*), Honduras, Costa Rica (*Arcé, van Patten, &c.*).

This species, long since described by Lesson, as above cited, has a wide range; and the southern forms have been described as distinct by Messrs. Gould and Cabanis as *osberti* and *salvini* respectively. Mr. Gould established his species upon specimens from Guatemala, brought by Mr. Salvin; and the only character given is its somewhat smaller size: but this will not hold good; for, with Mr. Gould's type before me, as well as other specimens brought by Mr. Salvin, I find that examples from Mexico brought by M. Sallé are equally small, and in no way to be distinguished from typical *osberti*. Costa-Rican specimens, separated by Cabanis as *salvini*, also are undistinguishable from *osberti* or *caniveti*; and with an ample series before me to judge, I cannot perceive any characters whatever to cause me to believe that there is more than one species. The brilliant crown is common to all, while, at the same time, individuals appear from all the different localities with green crowns exhibiting but little brilliancy, which may be accounted for by difference of season in which the birds were killed. The green of the body varies in intensity and tint, as is the case in all the species of this group, and for specific importance goes for nothing. *C. caniveti* is very closely allied indeed to *C. auriceps*, Gould, the only perceptible difference is that the rectrices of *auriceps* are longer and narrower; and although the rectrices of *caniveti* vary in length and width, I have not found any that are precisely like those of *C. auriceps*.

I give a table of measurements taken from seventeen specimens, from Mexico, Guatemala, and Costa Rica, showing how closely they all approximate to each other in size.

My specimens are:—

Mexico: 1 (*Sallé*), 1 (*De Oca*), Mus. S. & G.; 1 (*Sallé*), Mus. P.L.S.; 11 (*Sallé*), Mus. D.G.E. Guatemala: Dueñas 3 (*Salvin*), Mus. D. G. E.; Dueñas 11 (*Salvin*), Vera Paz 3 (*Salvin*), Mus. S. & G. Costa Rica: 3 (*Arcé*), Mus. S. & G.; 1 (*Endres*), 1 (*ex Gould*), 3 (*Van Patten*), Mus. D. G. E.

	Bill along gape.	Wing.	Tail.	Amount of fork.
1. Mexico (*Sallé*)	·60	1·80	1·45	·75
2. Oaxaca, Mexico (*Boucard*) ..	·65	1·80	1·45	·77
3. Mexico (*Sallé*)	·65	1·80	1·45	·79
4. " "	·69	1·85	1·23	·55
5. " "	·70	1·85	1·40	·70

	Bill along gape.	Wing.	Tail.	Amount of fork.
6. Jalapa, Mexico (*De Oca*) ..	·70	1·79	1·40	·67
7. Dueñas, Guatemala (*Salvin*), type of *C. osberti*	·67	1·84	1·25	·52
8. Coban, Vera Paz (*Salvin*) ..	·67	1·85	1·38	·55
9. SanGeronimo,VeraPaz(*Salv.*)	·69	1·90	1·30	·56
10. Lanquin, Vera Paz (*Salvin*) .	·67	1·85	1·40	·70
11. Dueñas, Guatemala (*Salvin*).	·69	1·75	1·30	·65
12. ,, ,, ,,	·65	1·82	1·30	·45
13. ,, ,, ,,	·70	1·76	1·25	·49
14. Vol. de Fuego (*Salvin*)	·67	1·75	1·20	·45
15. Costa Rica (*Van Patten*) ..	·69	1·82	imperfect.	
16. Tucuriqui, Costa Rica (*Arcé*)	·70	1·80	1·17	·45
17. Costa Rica................	·72	1·81	1·18	·38

The Genus PANYCHLORA.

PANYCHLORA POORTMANI.

Ornismya poortmani, Bourc. Rev. Zool. 1843, p. 2.

Chlorostilbon poortmanni, Gould, Mon. Troch. v. pl. 358.

Panychlora poortmanni, Cab. & Hein. Mus. Hein. Th. iii. (1860) p. 50, sp. 111; Gould, Intr. Troch. p. 180, sp. 414.

Ornismya esmeralda, Less. in Mus. Hein. & Berol.

Hab. Columbia (*Salmon, Chesterton, &c.*).

This species, belonging to the green-tail division of the black-billed group of this genus, has for its near ally (and the only species with which it may be confounded) *P. aliciæ*, Bourc. It may, however, readily be distinguished from that bird by the long bill, the grass-green of the abdomen, and the lighter green of the tail; and these characters appear to be constant. It is also a somewhat larger bird, and I have never been able to find any intermediate sizes between the two species; the difference of colour in the tail is very marked; and the species appear well established. It was first described by Bourcier in the 'Revue Zoologique' as *Ornismya poortmani*; and, according to Cabanis, Lesson gave the name of "*esmeralda*" to specimens in the Museums of Berlin and of Herr Heine. It is not uncommon in the interior of Columbia, and frequently comes in collections from Bogota.

My specimens are:—

Antioquia, Columbia, 3 (*Salmon*), Columbia 5 (*ex Whitely*), Mus. D.G.E.; Bogota 1 (*Chesterton*), 2 (*ex Trübner*), Mus. S. & G.; Bogota 1 (*Ward*), 1 (*Stevens*), 1 (*Eyton*), Mus. P. L. S.

PANYCHLORA ALICIÆ.

Trochilus aliciæ, Bourc. & Muls. Rev. Zool. 1848, p. 274.

Chlorostilbon aliciæ, Gould. Mon. Troch. v. pl. 357.

Panychlora aliciæ, Gould, Intr. Troch. p. 179, sp. 411.

Panychlora aurata, Cab. & Heine, Mus. Hein. Th. iii. (1860) p. 50, sp. 110?

Hab. Caracas, Venezuela (*Bourcier, Boucard*).

This species, first described by Bourcier and Mulsant in the 'Revue Zoologique,' as above cited, is one of the very smallest of Humming-birds. It is easily recognized by its entirely golden-green breast and very dark green tail, almost black in some specimens at the base. It can only be confounded with the *P. poortmani*; but its short bill and differently coloured tail will easily distinguish it. I have placed the *P. aurata* of Cab. & Heine among the synonyms of this species, judging from their description, which answers capitally for this bird. The locality, Peru, however, is one from which I have never seen a specimen of this species brought. It is possible the learned authors may have been misled as to the habitat of their specimen. *Smaragdites euchloris*, Reich., appears from the figure to be *P. aliciæ*, from the dark tail; but the figure is so unsatisfactory that access to the type will be necessary to enable one to say what the bird really is.

My specimens are:—

Caracas: 1, type of species (*Bourcier*), 1 (*ex Gould*), 5 (*Boucard*), Mus. D. G. E.

PANYCHLORA STENURA.

Panychlora stenura, Cab. & Heine, Mus. Hein. Th. iii. p. 50 (footnote) (1860); Gould, Intr. Troch. p. 180, sp. 413.

Panychlora aliciæ, Wyatt, Ibis, 1871, p. 379.

Chlorostilbon acuticaudus, Gould, P. Z. S. 1860, p. 308.

Hab. Merida, Venezuela (*Goering*); Ocaña, Columbia (*Wyatt*).

This species is remarkable in this section of the green Humming-birds by its extremely slender pointed outer rectrices. It is much larger than its relatives *P. aliciæ* and *P. poortmani*, though in colour it is similar to the latter. It is very rare in collections—the type in the Museum Heineanum, and two or three others, being all that have been sent to Europe.

The specimens examined are :—

Merida 1 (*Goering*), Ocaña, Columbia, 1 (*Wyatt*), Mus. S. & G.

X.—*Notes on the Birds of Heligoland in Mr. Gätke's Collection.* By John Cordeaux.

Having recently paid a short visit to the island of Heligoland, during which I had an opportunity of inspecting the collection of birds formed by Mr. H. Gätke, and knowing the great interest that has always been taken by ornithologists in every thing relating to the avifauna of this wonderful little spot of land, I submit the following notes to the readers of 'The Ibis,' trusting that they may not be without interest. I can only regret that limited time, as well as a limited knowledge of European ornithology, prevented me doing full justice to this remarkable and unique collection.

In 'Naumannia' for 1858 (p. 303), the late Professor Blasius gave an account of Mr. Gätke's most noteworthy captures on the island up to that year, a translation of which appeared in 'The Ibis' for 1862 (p. 58). This, and a list contributed by Mr. Gätke himself to the 'Edinburgh New Philosophical Journal' (New Series, ix. p. 333), comprise nearly all the ornithological information that has appeared in this country with respect to the island. It is, however, with great satisfaction that I am enabled to state that Mr. Gätke is at present engaged in the preparation of a work on the birds of Heligoland, which he expects to publish shortly. This work will be not only of remarkable interest to ornithogists generally, but also do more, in its collected facts and statements, to throw new light on the difficult and, as yet, little understood subject of migration than any work of its kind that has yet appeared.

Mr. Gätke has for more than twenty years kept regular journals of the arrival of those innumerable flocks and parties of birds which, during the period of the vernal and autumnal migrations, visit his island. These include nearly all our common English migrants. He has also scrupulously and carefully, in the most painstaking manner, chronicled the appearance of every rare wanderer that has come under his notice during the same period, taking descriptions and measurements and other notes of the fresh specimens, and in most cases, when of sufficient value and interest, added it to his collection. Many of these rarer and occasional visitants are wanderers from Northern Asia and America, others from North Africa and Southern Europe. In fact it may be almost said that birds of all countries are brought together on this lonely rock in the North Sea.

As an illustration of the value of these observations, and the extraordinary number of rare visitants which turn up, I will give an extract, which Mr. Gätke allowed me to take, from his journal for 1869:—

“1869.

October 1st.	Wind E., fine	*Emberiza pusilla.* One shot.
		Anthus cervinus. Two, both old birds.
		Muscicapa parva. One.
		Turdus whitii. One.
		Regulus modestus. One.
2nd.	....	*Turdus swainsoni.* One, ♀ mature.
3rd to 4th.	N.N.E., rain.	*Muscicapa parva.* Two, ♂ and ♀.
16th.	....	*Turdus whitii.* One, ♀.
16th to 31st.	S.W. to N.W. (very bad weather).	*Anthus richardi.* Every day in small parties (from three to eight).”

Heligoland lies directly in the track of the migratory flights from Southern Europe and Africa to those great bird-nurseries amidst the bleak inhospitable fells and arctic plains of Northern Europe and the frozen tundras of Asia. Birds in their migratory passage from one land to another follow, as a rule, the coast-line, and find this red-sandstone rock a convenient resting-place, a half-way house, between the Texel and the Naze. The lofty cliffs are visible many miles at sea; and at night the fan-like rays of the lighthouse, situated on the highest part of the island, two hundred feet or more above the sea-level, blaze forth like the rays of a sun, visible across miles of the stormy North Sea, attracting thousands of birds moving far above in their dreary night-journey. On some nights the air seemed alive with the fluttering of thousands of wings and the innumerable cries of birds. At early morning, after a stormy autumn night, flocks of winged travellers from distant lands are collected on the barren rock; for two thirds of the island is a mere bleak headland, exposed to every wind, and without the shelter of a tree or bush. Their number is often almost incredible.

On the evening of the 6th of November, 1868, at the Heligoland lighthouse, up to 9.30 P.M., when the moon rose and the birds discontinued coming to the light, 3400 Larks were captured round the lantern, fluttering and beating against the glass. Of these Mr. Gätke took 440 with his own hands. The same evening, with nets, lights, and so forth, on the flats surrounding the building, 11,600 others were taken, making altogether a grand total of 15,000 Larks. Besides these, many Snipes, Plovers, and other Waders were heard calling.

The line of flight of all birds in Heligoland is due E. and W., as correct as if they were steering by compass. This, Mr. Gätke says, is invariably the case, whether observed by day, by eyesight, or at night, by the sound of their wings, in spring or autumn.

The young birds always come first in the migration of each species, the old birds migrating later and bringing up the rear. This holds good both in the spring and autumn.

A curious fact connected with the ornithology of Heligoland is, that frequently birds, once regular visitants, disappear almost completely, to turn up again ten or fifteen years afterwards in greater abundance than ever. Others, again, once rare, and only occasional visitants, are now abundant.

Before proceeding with my list I must add that my thanks are due to Professor Newton for the assistance he has rendered me in preparing these notes.

AQUILA CHRYSAËTUS (Linnæus).
Immature, Nov. 9th, 1867.

HALIAETUS ALBICILLA (Linnæus).
Nov. 4th, 1870. Shot by Mr. Gätke's son, and in the collection. Another, a fine mature bird, was picked up dead on the beach of Sandy Island on the last day of January 1875.

FALCO GYRFALCO, Linnæus.
Oct. 12th, 1863.

FALCO VESPERTINUS, Linnæus.
Recent occurrences are June 4th, 1859; May 20th, 1868. A fine old male.

FALCO CENCHRIS, Naum.
A single example occurred some years since in May.

MILVUS ICTINUS (Savigny).
Not uncommon as a migrant.

MILVUS MIGRANS (Boddaert).
Turns up every year on the island, either in the spring or autumn.

BUTEO VULGARIS, Leach.
Occasional; turning up also sometimes in winter, when hard frosts set in.

BUTEO LAGOPUS (J. F. Gmelin).
A few in the spring and autumn, but is the least numerous of any of the Buzzards.

PERNIS APIVORUS (Linnæus).
Mr. Gätke says this is by far the most common of the Buzzards, not, however, appearing in the spring before it really has become warm, returning southward again in August and September. Besides single specimens, and two and three at a time, there are during both periods of migration not very unfrequently such flights that they may almost be termed thousands—not all massed together, but passing over

from midday to evening in batches of from five to fifteen or twenty to fifty, one following the other so closely that the first batch is not out of sight before the third or even the fourth begins to show already. The vernal migration takes place about the latter part of May, or a little earlier, on warm days with a calm clear sky and easterly wind.

CIRCUS CINERACEUS (Montagu).

CIRCUS SWAINSONI, Smith.

In the collection, three immature birds.

NYCTALA TENGMALMI (J. F. Gmelin).

Recent occurrences are Oct. 15th, 1859, two caught; Nov. 1866, one.

ASIO ACCIPITRINUS (Pallas).

Common in the autumn migration.

SCOPS GIU (Scopoli).

May 16th, 1862.

LANIUS EXCUBITOR, Linnæus.

Several in Mr. Gätke's collection. I saw other examples also in the shops of the bird-stuffers. Appears to be a common migrant, arriving early in spring and late in the autumn.

LANIUS MINOR, J. F. Gmelin.

Not so common as *L. excubitor*, occurring in the proportion of one to two of the former, is a much shier bird, and very difficult to get near.

LANIUS COLLURIO, Linnæus.

In the collection.

LANIUS AURICULATUS, P. L. S. Müller.

The same.

LANIUS PHŒNICURUS, Pallas.

One example in the collection. Oct. 26th, 1854*.

MUSCICAPA COLLARIS, Bechstein.

June 3rd, 1860, a male, the only example hitherto obtained.

---

* With regard to this species Mr. Gätke has recently informed me by letter, "it has turned out my little red-tailed Butcherbird is not *L. phœnicurus*, Pallas, but some other *smaller* species.

Muscicapa parva, Bechstein.

On several occasions, and in some numbers, invariably in October.

Cinclus aquaticus, Bechstein.

The examples in the collection belong to the black-bellied Scandinavian form.

Turdus varius, Pallas.

Has occurred several times. Mr. Gätke has five in one case, magnificent examples, all of which came fresh into his hands. Others have been seen and not obtained. Some recent occurrences are:—October 4th, 1864; April 23rd, 1869, a male; Oct. 1st, 1869, seen but not obtained; Oct. 16th, 1869, a female; Sept. 18th, 1870, not obtained.

Turdus swainsoni, Cab.

Oct. 2nd, 1869, a mature male.

Turdus ruficollis, Pall.

Immature, shot towards the end of November 1843.

Turdus iliacus, Linnæus.

There is a very dark variety in the collection, resembling, if not referable to, *Turdus sibiricus* of Pallas.

Galeoscoptes carolinensis (Linn.).

Oct. 28th, 1840.

Monticola saxatilis (Linnæus).

May 17th, 1860. Mr. Gätke has subsequently informed me of a second capture, a fine immature bird, on the 12th of November, 1874.

Monticola cyanus (Linnæus).

One example in the collection.

Accentor collaris (Scopoli).

Recent occurrences are:—Oct. 17th, 1862; May 2nd, 1870; and April 29th, 1873; and on two previous occasions.

Ruticilla suecica (Linnæus).

A common migrant. There is a fine series in this collection. I also observed many examples in the bird-stuffers' shops. It occurs every May, if warm and moist, in great numbers, twenty to thirty, and even forty a day; but with cold and dry weather, and northerly winds, it is very scarce. It again arrives, when fine, at the end of August, and in greater numbers than in the spring; it is then found in the potato-plots on the exposed and open part of the island. In the spring it is to be met with in the gardens, in gooseberry-bushes, &c.

Ruticilla phœnicurus (Linnæus).

A common migrant. About ten days before my visit, namely on the night of the 3rd of September, 1874, many Redstarts and Stonechats were taken round the lighthouse. Like almost every bird captured on the island, they were plucked and eaten. From the number of wings and tail-feathers of these species scattered about, their number must have been very considerable. One in the collection, with large white patch on the secondary wing-feathers is perhaps *Sylvia mesoleuca*, Ehr. See Ibis, 1874, p. 343.

Ruticilla titys (Scopoli).

A not uncommon migrant. I saw either a female or young bird of the year on the cliff on the morning of the 14th.

Saxicola rubicola (Linnæus).

A common migrant in the autumn, arriving early in September.

Saxicola rubetra (Linnæus).

The same remark applies; but this is always the most plentiful of the two.

Saxicola œnanthe (Linnæus).

Very numerous both in the spring and autumn. I found it plentiful on the Heligoland cliffs, as well as on Sandy Island. In the afternoon of the 19th of September, when beating out of the North Channel, several Wheatears, coming from the N.E., passed the cutter, flying just high enough to clear the waves, and making for the island.

Saxicola albicollis (Vieill.).

October 26th, 1851, and May 12th, 1860; both fine old males.

Saxicola stapazina (Linnæus).

Though shot but twice, observed at least every other year.

Saxicola leucomela (Pallas).

May 9th, 1867, a fine old male.

Saxicola leucura (Vieillot).

May 17th, 1873, a male. From fifteen to twenty years ago a specimen was obtained in autumn.

Aedon galactodes (Temminck).

In the collection.

Hypolais icterina (Vieillot).

In the collection*.

Acrocephalus aquaticus (J. F. Gmelin).

Occasionally. Three examples of this well-marked species in the collection.

Acrocephalus certhiola (Pallas).

One in the collection, a most beautiful example.

Lusciola caligata (Licht.).

Two in the collection.

Sylvia melanocephala (Gmelin).

April 20, 1873.

Phylloscopus borealis (Blasius).

First occurrence Oct. 6th, 1854. Mr. Gätke is pretty certain he saw another on the 1st of June, 1859.

Phylloscopus nattereri (Bonelli).

The first occurrence was on Oct. 8th, 1861; a second just after my visit, Oct. 9th, 1874. This was killed by a boy with a pea-shooter.

---

* Mr. Gätke has in his collection a bird allied to *Hypolais icterina*, and which he considered to be identical with *Sylvia japonica*. He describes it in a letter "as by far the yellowest of all our yet known European *Salicariæ*, yellower than *hypolais* or *sibilatrix*, but still of that particular kind of delicate yellow." It appeared to me to be closely allied to *Hypolais icterina*. It has the blue legs of *Hypolais*; and there is a rather broad and very distinct lightish band on the wing.

Phylloscopus superciliosus (J. F. Gmelin).

This most interesting little wanderer turns up regularly every autumn, invariably arriving with N.E. winds. Individuals have occurred from 1859 to 1874 on various days between Sept. 19th and Oct. 16th inclusive. Several are sometimes seen which are not obtained.

Regulus cristatus, K. L. Koch.

Occurs in the autumn in October in large flocks.

Dendrœca virens (Gmelin).

Oct. 19th, 1858, a very good example. Appears to be in transition-plumage, from summer to winter.

Troglodytes parvulus, K. L. Koch.

This little favourite of our gardens and shrubberies is found in considerable numbers in the autumn in the small enclosures attached to the houses in the town, as well as on every part of the bleak exposed headland, and even on the cliffs themselves. Mr. Gätke had no doubt whatever of its migratory habits. I have long held the same opinion; for whence come the number we invariably find in October in our treeless and exposed Lincolnshire and Holderness marsh districts, as well as amongst the marram-covered sand hills along the coast?

Parus major, Linnæus.

Acredula caudata (Linnæus).

In the collection. This is the Scandinavian bird with the pure white head.

Ampelis garrulus, Linnæus.

Accidentally, late in the autumn.

Motacilla lugubris, Temminck.

Motacilla alba, Linnæus.

Motacilla vidua, Sundevall.

May 18th, 1866.

Motacilla citreola, Pallas.

Four occurrences; recent ones are:—Nov. 15th, 1861, and Sept. 25th, 1870, both immature.

Motacilla melanocephala, Savi.

Occasionally. One was given me, purchased from the bird-stuffer at Heligoland.

Anthus cervinus, Pallas.

Two examples in the collection, both old birds, in beautiful plumage, obtained Oct. 1st, 1869. The wind easterly.

Anthus rupestris, Nilsson.

A Rock-Pipit, shot on the island during my visit, which I examined, was the Scandinavian bird.

Anthus spipoletta (Linnæus).

Has occurred on Heligoland; there is, however, no example in the collection.

Anthus ludovicianus (Gm.).

Two examples in the collection.

Anthus campestris, Bechstein.

In the collection.

Anthus richardi, Vieillot.

Was formerly of rare occurrence; it now turns up every year in some numbers; old birds in the spring, in May; old and young in the autumn, in September and October; sometimes in small flocks of ten, twenty, or thirty a day. In this latter season they invariably arrive under the same circumstances as *Phylloscopus superciliosus*, with a north-east wind. Mr. Gätke said that now probably something like five hundred were seen each year. An example in his collection measures 8½ inches in length.

Alauda tatarica, Pallas.

April 27th, 1874, a female, and the first example seen.

Alauda calandra, Linnæus.

In the collection.

Calandrella brachydactyla (Leisler).

Has occurred several times, both in the spring (May and early June) and in the autumn (September to November).

Otocorys alpestris (Linnæus).

Twenty-five years since this species was so rare that Mr. Gätke had to give four shillings for a specimen; now it is so common that nobody thinks it worth shooting. It arrives in the autumn with a northerly wind, from the middle of October to the middle of November, day after day, and often in flocks of hundreds*.

Emberiza lapponica (Linnæus).

So common in the autumn that it is not considered worth shooting.

Emberiza nivalis, Linnæus.

In large flocks in the later autumn. Mr. Gätke has in his collection mature birds, both of the larger and smaller races, in breeding-plumage. There is certainly in these examples a remarkable difference in size.

Emberiza pusilla, Pallas.

Nearly every year one or two, either mature or immature birds, are obtained in September and October.

Emberiza cæsia, Cretzschmaer.

Recent occurrences are:—May 22nd, 1859; May 16th, 1862, fine old male; May 29th, 1866, female; May 9th, 1867; May 6th, 1873, a fine old male.

Emberiza rustica, Pallas.

One old male and two young birds in the collection. Recent occurrences are:—Oct. 9th, 1863, immature; September 19th, 1870, the same; April 3rd, 1873, a fine old male.

Emreriza aureola, Pallas.

Three immature birds in the collection. The two most recent captures were:—November 5th, 1864, immature; July 8th, 1870, a female.

---

* Extraordinarily large flights visited the island in the autumn of 1874.

Emberiza cirlus, Linnæus.

The first and, I believe, the only occurrence was a fine old male, taken April 29th, 1862.

Emberiza melanocephala, Scopoli.

Two beautiful mature birds in the collection. The occurrences are, in three consecutive years:—June 18th, 1860, a female; June 15th, 1861, a female; May 28th, 1862, a fine old male.

Emberiza hortulana, Linnæus.

Very numerous in May and in the early part of September.

Fringilla serinus, Linnæus.

July 14th, 1860, an old male, the only example.

Fringilla montifringilla, Linnæus.

A common migrant.

Pyrrhula vulgaris, Temminck.

The specimens obtained are more richly and deeply coloured than our English bird.

Carpodacus roseus (Pallas).

About four autumnal occurrences, immature birds. One October 27th, 1865, another Oct. 15th, 1870, a very fine example.

Loxia leucoptera, Gmelin.

Is rather a rare visitant to the island. Its appearance, like that of the Common Crossbill, is *generally* in August, with stormy weather from the west or north-west. From the end of August till the 20th of September in 1868 it was uncommonly numerous, sometimes twenty or thirty together, weather fine, wind easterly and north-easterly. Mr. Gätke has a fine adult male with but two very narrow white bands across the wing, consisting merely of narrow white tips to the greater and lesser outer wing-coverts. This bird is somewhat stouter than the broad-banded ones.

Loxia curvirostra, Linnæus.

Arrives under similar conditions to the last, in flocks of from twenty to fifty, often with one or more white-banded individuals accompanying them.

Pastor roseus (Linnæus).
July 7th, 1870.

Picus viridis, Linnæus.
Has occurred once.

Picus major, Linnæus.
A few every year in the autumn and spring.

Upupa epops, Linnæus.
Every year from ten to twenty specimens, from end of April to middle of May. On *warm* days during that period.

Alcedo ispida, Linnæus.
Very seldom; no fixed time.

Hirundo rufula, Temminck.
May 31st, 1855. One occurrence, a most perfect example.

Cypselus melba (Linn.).
Two have been seen in Heligoland, one of which is in Mr. Gätke's collection.

Columba palumbus, Linnæus.
Is common during both periods of migration, flights more numerous in the autumn than in the spring, from five to ten or twenty in a flock. Time of migration from the end of March to the end of May, and from the latter part of September to the end of October.

Turtur auritus, Gray.

Syrrhaptes paradoxus (Pallas).
Nov. 15th, 1863, two flocks, numbering seven and nine; Oct. 30th, 1863, one bird.

Charadrius virginicus, Borckhausen.
Captured Dec. 20th, 1847.

Charadrius longipes, Temminck.
Three occurrences, all in the summer:—June 25th, 1857, a male; June 18th, 1860, a female; July 11th, 1867, a very fine male in perfect summer plumage.

Eudromias morinellus (Linnæus).
Ten to fifteen years ago was comparatively common in May,

requiring fine, calm, warm weather and southerly winds; it is now scarce. Mr. Gätke says he has not been able to procure a *fine* example for his collection for four or five years.

EUDROMIAS ASIATICUS (Pallas).

Has occurred twice in Heligoland—on the 16th of November, 1850, a young bird, and on May 19th, 1859, an old male in summer plumage.

ÆGIALITIS CURONICA (Gmelin).

Curiously enough, has only occurred twice; is considered in Heligoland a very rare bird. The two occurrences were:—June 30th, 1859, immature; May 26th, 1866, a female.

TOTANUS GLOTTIS (Pallas).

TOTANUS OCHROPUS (Linnæus).

TOTANUS GLAREOLA (Linnæus).

TOTANUS STAGNATILIS, Bechstein.

One occurrence, a fine old male, on the 7th of May, 1862. The upper surface most beautifully mottled with the curious zigzag markings peculiar to this species.

MACHETES PUGNAX (Linnæus).

Occurs both as a spring and autumn migrant. Mr. Gätke has a fine series of male birds in full nuptial attire.

TRINGA MINUTA, Leisler.

TRINGA TEMMINCKI, Leisler.

PHALAROPUS FULICARIUS (Linnæus).

An autumn migrant, both old and young birds occurring in considerable numbers.

PHALAROPUS HYPERBOREUS (Linnæus).

Only two or three times in twenty years.

SCOLOPAX RUSTICOLA, Linnæus.

Is not nearly of so common occurrence as formerly; only fifteen this autumn (1874) up to November 4th.

GALLINAGO MAJOR (Gmelin).

BOTAURUS MINUTUS (Linnæus).

One example in the collection.

RALLUS AQUATICUS, Linnæus.

A few in March and April, and again in September, October, and November, and occasionally later. Probably not more than a score, Mr. Gätke says, could be captured in any one year on the island.

CREX PRATENSIS, Bechstein.

In April and May, also middle of August and September; weather warm; pretty common, although never in great numbers.

CREX PORZANA (Linnæus).

In May when warm; occasionally in September. Not half a score in a year, but three fourths of these in May.

CREX BAILLONI (Vieillot).

Only once, a fine male.

CREX PUSILLA (Gmelin).

Only once, a female, April 22nd, 1854. Mr. Gätke says, a few times the little Gallinules have been seen; but without capturing it, the species cannot be determined.

GALLINULA CHLOROPUS (Linnæus).

Occasionally occurs as a migrant in April and May when the weather is warm, also from the end of August to the 15th of September,—so few, however, that Mr. Gätke says you cannot count on three in each successive year.

FULICA ATRA, Linnæus.

Obtained about once a year, sometimes in spring, sometimes autumn, and even in the depth of winter.

SOMATERIA MOLLISSIMA (Linnæus).

Frequently seen off the island. On the 19th of September, when some miles to the north of Heligoland, twelve male Eiders, all in line, passed the cutter, flying towards the headland.

SOMATERIA STELLERI (Pallas).

Has occurred three or four times; all birds of the year.

ALCA TORDA, Linnæus, and URIA TROILE (Linnæus).

Both nest in some numbers on the cliffs. Shooting is permitted from boats on and after the 25th of July, St. James's day—the feast known at Heligoland as "Jacob's day."

SULA BASSANA (Linnæus).

Very common in the vicinity of the island during my visit, and, indeed, in every part of the North Sea; all mature birds. During a sixteen-days' cruise I did not see a single example of the immature bird.

STERNA CASPIA, Pallas.

None in the collection, although this fine Tern is occasionally seen off the island. Still nests, although in limited number, on Sylt. Mr. Gätke has two eggs in his cabinet from that locality, obtained fresh by himself during a visit he paid there early in June 1874. (See Ibis, 1874, p. 401.)

STERNA DOUGALLI, Montagu.

Two occurrences only have been noted by Mr. Gätke.

STERNA ANGLICA, Montagu.

In the collection. An occasional visitant.

LARUS SABINII, Sabine.

One in the collection, an immature bird.

LARUS ROSSI, Richardson.

Shot February 5th, 1858, a mature bird in winter plumage. A very fine and perfect example, most artistically set up by Mr. Gätke.

LARUS MINUTUS, Pallas.

In breeding-plumage.

LARUS LEUCOPTERUS, Faber.

Not uncommon.

LARUS GLAUCUS, Gmelin.

The same. I saw a fine immature bird close to the cutter as we were running for the island on the 13th September.

LESTRIS LONGICAUDUS, Vieillot.

In the collection.

PUFFINUS MAJOR, Faber.

Very uncommon. This, or a large Shearwater, has been seen off the island, but, as far as I could ascertain, never obtained. All the Procellariidæ, excepting *Fulmarus glacialis* (Linn.), appear to be of very uncommon occurrence.

Procellaria leucorrhoa, V.

One example in the collection, being the sole individual of its kind ever obtained there.

In bringing these notes to a conclusion, I cannot but express my regret at their incomplete form. During a short stay of five days in the island my time was much occupied in other matters, as was also Mr. Gätke's in his official duties. It was with some difficulty I managed to give up two short afternoons to the inspection of his ornithological collection only: to give then any thing like a detailed description would have required a much longer and closer examination than I was able to give. I have purposely abstained from any mention or notice of any but such species as I thought were of general interest and of the most importance. I trust, however, enough has been said to induce some of our English ornithologists, having a thorough knowledge of the ornis of the continent of Europe, to visit Heligoland, and complete what I have only glanced at.

XI.—*The Birds of Transylvania.* By Charles G. Danford, F.Z.S., and John A. Harvie Brown.

Part I.

As an introduction to this paper on the avifauna of Transylvania or Siebenbürgen, it may be well to give a slight description of the singular features which the varied surface of the land presents.

Transylvania, as will be seen on looking at a map of the country, is nearly circular in shape, and is almost surrounded by a chain of mountains, the highest peaks of which, the Páreng and Negoi, in the Hunyad and Fogaras districts of the south, are respectively 8060 feet and 8046 feet in height, while others of the same chain, such as the Vunetura-Butianu, Bucsecs, Retjezát, &c., attain heights of very nearly 8000 feet. The surface of the country, in point of fact, may be said to resemble a saucer or shallow cup, the land gradually curving upwards from the central undulating plain towards the rim of encircling mountains. Of the central districts of Transylvania, some portions are well wooded and watered; but there are also great tracts of country singularly destitute of timber, the innumerable minor hills and valleys being for the most part waterless.

Especially remarkable is the district of the Mezöség (literally "field-lands"), extending from Apahída, near Klausenburg, in the west, nearly to Maros-Vásárhely, in the east, and bounded by the courses of three of the principal rivers of Transylvania—the Maros and Aranyos (golden) rivers on the south and south-west, and the Szamos on the north and west. A monotonous country it is, having a weary outline of low hills and valleys, the former rising to a height of 200 or 300 feet, the exact counterparts of one another, and enclosing the valleys, which are alike monotonous in their aspect. The surface-soil is rich and loamy, and almost black in colour; loose and friable in dry weather, but easily converted by a few hours' rain into a deep sticky mud, which is exceedingly trying to the traveller, whether he be pursuing his journey on foot or driving in the strong rough carts of the country. It is often the case that not even one small stone can be detected along miles and miles of a Mezöség road. The hills near the villages are cultivated to the summits; and in spring, before the kukoricza (Indian corn) shoots up, or the scattered vineyards show their green leaves, the aspect of the country is monotonous in the extreme.

Underlying the loamy surface-soil, and extending throughout the whole length and breadth of the Mezöség, at an unvarying depth of about 15 feet, is a band of hard white or yellowish white clay, having a smooth slippery upper surface. Upon this clay, which is almost as hard as rock, the lighter soil slides down the hill-sides in a most remarkable manner, forming the slopes into regular terraces, or pushing the soil lower down into wave-like ridges. In many instances these gigantic landslips actually fill up some of the smaller valleys, causing a great deal of labour and inconvenience to the inhabitants.

We collected birds in the Mezöség district from the 1st to the 20th of May; and during that time 107 species came under our observation*. Owing to the exceptionably severe weather in spring of the present year (1874), the breeding of the aquatic birds was considerably retarded. As a proof of this, we found very few nests of water-fowl during our stay there, even a month after the time assigned by the natives as their usual breeding-season. The reedy lakes near Záh are the favourite resorts of innumerable water-fowl, whether of the resident species or of those passing on their migrations. There we found a colony of Night-Herons, whilst the Purple Heron, Common Heron, and Little Bittern were also common. From amongst the great reed-beds the Thrush-like Warbler sent forth his harsh grating note; and the rarer and more unobtrusive River-Warbler was found in small numbers. The Bearded Tit, on warm sunny days, might be seen frequenting the edges of the reed-beds; and three specimens of the Penduline Tit were on one occasion observed by our assistant and fellow-traveller, Herr Klir. Marsh and Swainson's Harriers had their nests among the reeds; Coots and Moorhens swam in numbers on the surface of the water; and Black and White-winged Terns, and a few specimens of the Little Gull hovered over the water, or settled to rest on the floating roots and matted stems of the water-plants. A small flock of the White-headed Duck, together with other species of that family, floated lightly and lazily on the water under the warm sun; and Grebes of at least three species dived along the margins of the reed-beds. And above all the many wild-bird cries which we heard, the loud croaking of innumerable frogs, like the musical throbbing notes of a large Æolian harp, was ever present.

---

* Herr Hermann Ottó, former curator of the Klausenburg Museum, enumerates 173 species as occurring to his knowledge in the Mezöség: *vide* list of works at the end of this introductory portion of our paper. Graf Lázár, writing of the waterbirds of Transylvania, says that there used to be many more swimmers and waders in Transylvania, and that their numbers are yearly decreasing—giving as reasons the diminished rainfall in consequence of devastation of forests, and the interference with their breeding-grounds on the Theiss by certain systems for the regulation of the water which have been adopted on that river.

Turning to the land, we found the vineyards on the slopes, and the little isolated clumps and belts of wood (few and far between, like the oases of the desert) full of life; and birds are more easily found in these small woods than in the great oak-, beach-, or pine-tracts nearer to the mountains. Golden Orioles, Nightingales, and Turtledoves vied with one another in waking the echoes; and the warblings of the Blackcap and, more rarely, of its relation the Barred Warbler were occasionally heard. In the vineyards and fruit-gardens Goldfinches and Shrikes were the most conspicuous species; and in the meadows in the valleys the "whit, whit-whit" of the Quail was constantly heard; and the Crested Lark and the common Bunting tripped along the dusty roads or perched on the low bushes around. Thus it will be seen that the Mezöség is rich in bird-life as in flowers; but the heat is great at midsummer, and the water is almost poisonous. The ornithologist collecting there will do well to escape, as we did, towards the mountains before the great heat sets in.

Our next station was at Görgény Szent Imri, in Székler Land, amidst old forests of primeval oak of great extent, once the haunt of the wild aurochs, but now tenanted by long-horned tame white cattle, and by herds of wiry little horses, the property of the villagers. Description cannot do justice to these glorious old oak trees. It is not their height that is remarkable, but their great girth and their giant branches, knotted and twisted into every curious and fantastic shape. These grand old trees stand on a slightly marshy park-like plateau, a few feet above the level of the valley of Görgény, and are in some places from thirty to forty yards apart, giving to the forest the appearance of an old English park on a great scale. In many instances age and decay have been assisted in hollowing out the great gaunt stems by the axes of the woodmen when seeking fuel for their camp-fires. Thus great caverns are formed, large enough to give shelter to half a dozen men in a storm. From the marshy nature of the ground, this forest of Görgény is called the Mocsár (or swamp-) forest. We stayed at Görgény Szent Imri from the 22nd of May to the 30th of May, finding a somewhat different fauna. Woodpeckers, Thrushes, and Blackbirds (which we had failed to observe in the Mezöség), Stock-Doves, Jackdaws, and Starlings were numerous; Hoopoes bred in the hollow trees in deserted Woodpeckers' holes; and Orioles, Lesser Grey Shrikes, and Red-backed Shrikes were as abundant as in the Mezöség. Water birds were, of course, almost absent.

We proceeded to Fanczal, higher up the Görgény valley, on the 30th May, passing along the banks of a rushing mountain-river, down which huge rafts of pine wood are floated from the mountains. On both sides the hills rise steeply as the valley contracts, beech wood clothing their sides and summits, with a few tall pines relieving the lighter foliage with their more sombre tints. At Fanczal and Ober-Fanczal (eight miles up a lateral valley from Fanczal) we remained till the 5th of June, not adding much to our collections, but forming some idea of the limited avifauna of the pine-region* and of the mossy summits of the mountains above the pines at an elevation of about 4000–4500 feet. In these localities we found the Crested and Marsh Titmice and the Ring-Ouzel not uncommon, the latter species frequenting the upper limit of the pine-woods; and we heard the Great Black Woodpecker and the Capercaillie. The Spotted Eagle was common in the beech- and pine-clad valleys, and the Golden Eagle was occasionally recognized. Over the summit of the Fanczal Berg two Kestrels were seen hovering; and there also we procured a good many specimens of the Water-Pipit. The Dipper frequented the streams; and the Grey Wagtail became more abundant as we ascended the valleys. Shrikes, Orioles, Jackdaws, Stock-Doves, and Turtledoves, and by far the greater part of the previously observed fauna entirely disappeared, although Fanczal is not more than fifteen miles higher up the valley than Görgény. The Chaffinch and the Wren we found far up among the pines, the former frequenting the uppermost limit of the pine-growth at nearly 4000 feet elevation. The Goshawk and the Sparrow-hawk were also noticed.

---

* The trees forming the great bulk of the mountain-forests are *Abies pectinata* and *A. excelsa.* A fourth of the country is under wood. The largest pine exhibited at the Vienna exhibition was cut near Fanczal.

Virtually our collecting ceased with our last day's stay at Fanczal, which, though merely a forest station for the accommodation of the Förstmeisters, is a comfortable châlet-built house, beautifully situated at the junction of the Görgény and Fanczal valleys. From Fanczal we returned to Görgény Szent Imri, and proceeded to Maros-Vásárhely (which latter place we had made our headquarters during our excursions in the Mezöség and Székler Land), and shortly afterwards went on to Klausenburg. From Klausenburg we made several short and not very productive trips. Harvie Brown visited the salt-mines of Maros-Ujvár; and we paid a visit to Szent Mihály, by the kind invitation of Count Albert v. Bánffy. Here we procured a fine specimen of the Short-toed Eagle, the only one seen by us in the country.

We ought to have mentioned before that, previously to our visit to the Mezöség, we spent a week at Hátzeg in the south-west of the country, and in the Klopotiva valley*, under the chamois-haunted Retjezát, we obtained specimens of the Meadow-Bunting and Rock-Thrush. At Réa we had the pleasure of inspecting the rich collection of birds, fish, and minerals belonging to Herr Adám v. Buda, in whose house we were hospitably entertained during the greater part of our stay in that neighbourhood. To Herr Buda we are also indebted for a full catalogue of the birds of his district and some notes thereon. Most of those have been procured by his brother, Herr Carl v. Buda, and himself near Hátzeg.

One word as to the mineral wealth of Transylvania. Perhaps no land in Europe, of its size, is so rich in metals, yielding gold, silver, tellurium, copper, lead, quicksilver, and iron; the annual yield of the former is considerable. Iron is especially abundant near Petroseny, in the south-west.

---

* This river, at different parts of its course, takes different names. Above the village of Klopotiva and in the mountains it is called Lepusnik; at the entrance to the gorge, Klopotiva; and lower down, Sebes (or swift-flowing).

Having thus given a rough outline of our routes, and attempted to describe the more remarkable features of the country through which we passed, a word or two as regards its sporting-capabilities may not be out of place.

The fisherman need not look for any great amusement; for though most of the mountain-rivers contain trout and grayling, they are generally rather small. Perhaps the best stream in the country is the Sebes (before mentioned), which flows from behind the Retjezát, and joins the Strell near Hátzeg: the trout are not bad, running sometimes to one or two pounds in weight; and the grayling-fishing is really good; almost any number may be taken in autumn when weather and water are in good order. The Sil also, near Petroseny, is a fine-looking river, and used to be celebrated for its so-called "salmon-trout" (*Salmo hucho*); but these had quite disappeared when we saw it, having been blown up with dynamite, a method of fishing very commonly practised in the country, but now forbidden by law. Indeed fly-fishing is gaining ground, and English tackle is in great demand.

More use will be found for the gun than the rod; and if the sportsman will work for it, he will find that he can make fair and varied, though rarely large bags. Transylvania is probably the best country in Europe for bears; and notably the best districts are those of Görgény Szent Imri and Hátzeg. The first is, contrary to all precedent, preserved; and the result is, that, being seldom disturbed, the bears have increased greatly, and do serious damage to the live stock of the neighbourhood. The Ober-Förstmeister assured us that, on one occasion, seventeen were seen in a single drive, nine of them coming to one gun, and the whole of them escaping*. In all other districts the sport is free. A large force of beaters is necessary in most places;

---

* In 1851 eighty-six bears were killed in Transylvania; in 1853 sixty-five; and in 1854 eighty-six. ('Handbuch der Landeskunde Siebenbürgens.')

and these generally turn out (men, women, and children) by order of the magistrate. Other small woods and ravines can be tried more quietly: a few Wallachs, who are up to their work, and three or four guns will do well enough. These Wallachs are by far the best sportsmen of the country, having the ways of the woods and game thoroughly by heart, and for the sake of the sport, and a little tobacco and schnaps, they will do any thing. We have never seen better performances than their quickness and endurance in driving chamois, of which there are in some districts a good number. The Retjezát and some of the adjoining hills are also preserved by a club of sportsmen; but outside their territory there is plenty of ground and a good show of chamois. The country is rocky, with here and there a good deal of creeping pine, but not difficult to get over. The views to be got looking down into Wallachia, over an endless series of summits and ridges, are alone worth the trouble of going up. The sportsman should take a small tent with him; or he will often be very cold, and always well bitten, the poor unsquared-log huts of the summer shepherds being full of wind-holes and fleas.

Wild boar do exist in the country, but are by no means numerous; towards the south-west is about the best district to look for them. Wolves there are everywhere, but they are hardly ever to be seen except in winter*. Lynx are getting rare, but are occasionally got in the south and north-east; and rarer still is the marmot, a specimen of which a gentleman told us he had shot in the Fogaras district five years ago; they have also been got on the Retjezát, and on the Rodnaer and Székler frontier mountains. Red deer are scarce; the best district is the Rothenthurm pass and other parts bordering on Wallachia. Roe deer are common enough; and it seems to us that they are very large. One may go a long way without seeing a hare; its merits for the pot, for which it is in most places killed at all sizes and times, will account for this. Other animals, such as wild cat, fox, badger, otter, yellow- and white-breasted martens, and the smaller carnivora are pretty numerous. The ibex and aurochs have long been extinct. Of the former we have not been able to learn much. Of the latter, Bieltz, in his 'Fauna der Wirbelthiere Siebenbürgens' (p. 35), says, on the authority of Benkö, that some were seen in March 1775 in a wood at Füle, in the district of Udvárhely—that, according to Fridvaldszky ('Mineralogia Magni Principatûs Transsilvaniae,' Claudiopoli A.S. MDCCLXVIII., p. 6), they especially frequented the woods of Gyergyo, in the neighbourhood of a marsh; and that Petényi says that the last killed in Transylvania was in the year 1814.

---

* One young one, brought home by Danford, having been presented to him by Professor Encz, of Klausenburg, is now in the Zoological Gardens, Regent's Park.

Feathered game is certainly not abundant. There are a good many Capercaillie in the quiet pine-woods pretty high up; but they are only to be got at during the pairing-season. Hazel-Grouse, too, are common in the lower woods, but are not easily found, unless the call-system be adopted. Black game are scarcely worth mentioning, as far as sport is concerned; they are so scarce, and in such out-of-the-way places. In the grain-districts one would expect to find a good many Partridges; but this is not the case; the coveys are few and far between—want of preservation, and the number of Hooded Crows and birds of prey, making life rather hard for them. Quails are numerous; but the best sport to be got is the autumn Woodcock-shooting, particularly at Görgény and in the Háromseg, while for Snipe the salt marshes near Maros-Ujvár would be well worth trying. From what we saw of the Mezöség, we should think that the winter Duck-shooting must be capital; better ground one could not wish for than its numerous small lakes connected with reedy marshes; and in the neighbourhood of Thorda there are always a few Bustards. On the whole we should say that luck and perseverance have a good deal to do with sport in Transylvania.

It now remains for us, before commencing the second part of our paper, to express our obligations to the many kind friends for the frank and hospitable way in which we were everywhere received and our plans assisted. Especially are our thanks due to Professors Finály and Encz, of the Klausenburg University; to Baron Houzar János, of that town; and Count Bánffy Béla, of Szent Mihály; and to HH. Buda Adám, and Carl, of Réa, near Hátzeg, and Herr Ugron, of Záh; and to Herr Adalbert Fikker, k. k. Ober-Förstmeister at Görgény Szent Imri; also to our friend and fellow-traveller, Herr Klir János, the curator of the Klausenburg Museum, who accompanied us on all our trips, and to whose valuable assistance, hearty cooperation, and good fellowship we owe much of the success and pleasure of our trip. We also received valuable information from Herr A. v. Pelzeln, of the k. k. Zoological Museum at Vienna.

We must not forget also our kind friends at home for much ready assistance given to us. Professor Newton has helped us to the names of several of the works we have consulted, and given us other useful aid. Messrs. E. R. Alston and H. E. Dresser looked over our collections and assisted us in difficulties of nomenclature &c.; and Mr. J. E. Harting gave us useful information on several points of importance.

In the preparation of the following list of Transylvanian birds, we have, as far as possible, compared our own notes with the following:—

1. BUDA, Herr Adám. M.S. Catalogue of and Notes on his Collection at Réa, near Hátzeg.

2. BALDAMUS, Dr. "Beiträge zur Naturgeschichte einiger dem S.O. Europa's angehörenden Vögel," Naumannia, 1851, pt. 1, p. 28, pt. 2, p. 70, pt. 4, p. 39, and 1852, pt. 2, p. 81.

3. BIELTZ, Herr A. E. 'Fauna der Wirbelthiere Siebenbürgens.' 8vo: Hermannstadt, 1856.

4. ——. "Beitrag zur Unterscheidung der rabenartigen Vögel." Verhandlungen und Mittheilungen des Siebenbürgischer Vereins für Naturwissenschaft, IV. Jahrgang, p. 55. Hermannstadt.

5. CSÁTO, Herr János. "A Retjezát helyviszonyi és természetrajzi tekintetben," Az Erdelyi Muzeum-Egylet Évkönyvei, IV. Kötet, II. Füset, p. 72*.

---

* "The Retjezát in its Local and Natural-History relations." In the annual publications of the Transylvanian Museum Society, vol. iv. pt. ii. p. 72.

6. Csáto, Herr János. "A Strigy menteneks mellékvölgyeinek természetrajzi leirása"*, Az Erdélyi Muz. Egy. Év. VI. Kötet, II. Füzet, p. 104.

7. ——. "Sylvia luscinioides," Verhandl. & Mittheil. des Siebenb. Vereins für Naturw. XIV. Jahrgang, p. 145. Hermannstadt.

8. Finger, Herr Julius. 'Fauna Austriaca Ornithologica—Verzeichniss der Vögel des österreichischen Kaiserstadtes.' Wien, 1857.

9. Hausmann, Herr Wilhelm. "Turdus saxatilis," Verh. & Mitth. des Siebenb. Vereins für Naturw. XVI. Jahrgang, p. 107–118.

10. ——. "Vögelvarietaten aus Siebenbürgen," Verh. & Mitth. des Siebenb. Vereins für Naturw. XX. Jahrgang, p. 3.

11. Klausenburg Museum, MS. List of the Birds in.

12. Lázár, Count Kálmán. "A madarakról különös tekintettel az Erdélyben honos fajokra"†, Az Erdélyi Muz. Egylet Év. I. Kötet, II. Füzet, 69. 1860.

13. ——. "Aquila pennata és Aquila minuta," *ib.* I. Kötet, III. Füzet, 153.

14. ——. "Erdélyi madarainak Jegyzéke—Enumeratio avium Transsylvanicarum."

15. ——. "Kurtze Beiträge zur Ornithologie Siebenbürgens," Verh. & Mitth. des Siebenb. Vereins für Naturw. X. Jahrgang.

16. Ottó, Herr Hermann. "Falco subbuteo, Linné.," Erd. Muz. E. Év. III. Kötet, II. Füzet, p. 84.

17. ——. "Állattani Közlések"‡,
Erd. Muz. E. Év. III. K. II. 87. 1866.
" IV. " I. 48. 1867.
" V. " I. 30. 1869.
" V. " II. 92. 1870.

18. ——. "A Mezöség I.—A Hódos vagy Szarvastó és Környéke"§, Erd. Muz. E. Év. V. K. I. 8.

19. ——. "A Mezöség II.—A Mezö-Záh-Toháti, továbbá, Méhesi, Báldi és Mezö-Sályi tózorozat"‖, Erd. Muz. E. Év. VI. K. I. 42.

20. ——. "Erismatura leucocephala, L.—A Magyar ornisban," Az

---

* "A Natural-History description of the Valley of the Strell and its adjacent Valleys."

† "On birds, with especial reference to the species breeding in Transylvania."

‡ "Zoological Communications." In Ann. Pub. Trans. Mus. Soc.

§ "The Mezöség I.—The lake of Hódos (Beaver), or Szarvas (Stag), and its immediate neighbourhood."

‖ "The Mezöség II.—The lake-chain of Mezö-Záh-Tohát, and, further, of Méhes (*i. e.* abounding in bees), Bald, and Mezö-Sály.

Eggenberger-féle Akad. Könyvkereskedés, Hoffmann és Molnár. 1873. We have not been able to consult this paper.

21. Pelzeln, Herr A. von. "Beitrag zur ornith. Fauna der österr.-ungar. Monarchie," Verh. der k. k. zool.-botanischen Gesellschaft in Wien, 1871.

22. Stetter, Herr. (Various species noticed.) Verh. & Mitth. des Siebenb. Vereins für Naturw. XV. Jahrgang, p. 235.

23. Tschusi-Schmidhofen, Victor Ritter von. "Nucifraga Caryocatactes." A monograph.

Besides the above, there is a paper on the birds of the Theiss and Lower Danube, by Zelebor, which may be consulted, though it has not much bearing on Transylvania, along with Herr A. v. Pelzeln's remarks upon the same in 'Journal für Ornithologie,' 1864 (*cf.* Ibis, 1865, pp. 225, 226).

The Hungarian names (printed in italics) which we give are extracted from Bieltz and from various other sources. We have endeavoured to translate these, except where they are equivalent to the English, or are proper names, having no particular interpretation. As in other countries, the names undergo many variations in different parts of Hungary.

All the species observed by us during our present trip, or by Danford on his previous visit in the autumn of 1872, are indicated by an asterisk in the following list.

[To be continued.]

XII.—*On the Nidification of certain Indian Birds.*—Part IV.*

By Andrew Anderson, F.Z.S.

Aquila hastata.

I should premise by stating that my excursion into the Saharunpore district, entailing a journey of over 700 miles, to and fro, with the thermometer standing at 117° in the shade (168° in the sun), was undertaken for the express purpose of securing nestling-birds, and not for the sake of becoming possessed of eggs, of which latter I might have become the happy owner of no less than seven specimens. As the acquisition of the young birds has, at last, enabled me to supply the missing link in the history of this interesting Eagle*, my first disappointment has been fully compensated for by the filling of a blank in my egg-cabinet.

---

* For Part III. see Ibis, 1874, p. 220.

I need not inflict upon my readers the details of my journey, nor recount the hardships and discomforts which befell me while engaged in the "cause of science." Suffice it to say that after uninterrupted travelling of all sorts for forty hours (carriage, mail-cart, and rail), I arrived at Saharunpore at midnight of the 29th June, 1873. My collectors, including a lad to climb, a skinner, &c., under the command of Ungun (who had the year before enriched Mr. Brooks's collection with eggs of *A. nævia* and *A. hastata* from the same locality), had preceded me by a fortnight, with a supply of ready-addressed and stamped envelopes; so that my "daily reports" were received with the regularity so becoming to an Indian official.

I take the present opportunity of tendering my thanks to Mr. Kennedy, Joint Magistrate of Saharunpore, for his kindness in allowing my pioneers to make use of his premises as a base of operations, and for keeping me informed, from time to time, of what progress they made; for our Aryan brethren require to be well sat upon, even under the most advantageous circumstances.

From the train (it was 2 A.M. before I despatched a light breakfast and put together some necessaries for the road) I, accompanied by my attendants, who met me at the railway station, stepped into a carriage which had been engaged for the purpose, and made straight for the Jumna Canal; for our road lay along the canal-banks (up and down) for another forty miles. A three hours' drive brought us to the first nest†, in which, according to my reports, the youngster could not have been more than ten days old. We alighted half a mile before the tree was reached, as Ungun declared that the parent birds had become extremely wary, owing to his frequent inspections, and that, if we wanted to catch either of them at home, the utmost caution was necessary. A few minutes' walk under cover of the avenue of trees which grow so luxuriantly along the water's edge, enabled us to descry one of the parent birds at an immense height in the air, making gyrations on almost motionless wings over the tree on which the nest was built.

---

* A description of the plumage of the young birds, which have now moulted, will appear in the 'Proceedings' of the Zoological Society.

† The seven nests which had been discovered contained each only one egg. Two of these had been robbed; and in two the squabs had died from the extreme heat. It was the hottest season on record; and the "rains," which generally burst on the 18th of June, were already a fortnight overdue.

Now, as *A. nævia* and *A. hastata* had both been known to breed in this very locality in former years, identification was a matter of the utmost importance*; so after having a look at the young bird, which was carefully deposited in the nest again *pro tem.*, and leaving one of our party to act as guardian, and to cook for the others, we drove on to nest No. 2, which was on the opposite bank of the canal.

Here, again, we were equally unfortunate, as both the parent birds were circling overhead, now and again making wide gyrations, and quartering the jungle Harrier-fashion, apparently in search of food. Arrived under the tree, we found our young friend standing bolt upright in the nest, peering down upon us unwelcome visitors in the most comical manner. It was now nearly midday; and the heat was so terrific that I could hardly touch the barrels of my gun, and the furnace blast which was fast rising would soon preclude the possibility of my doing any thing further till the afternoon.

After remaining concealed (as best I could) for a considerable length of time, during which period the Eaglet called lustily for food, and was frequently responded to by the parent birds, one of my scouts gave the alarm, which put me on the alert. Almost simultaneously with the warning I saw one of the parent birds swoop into the nest from the opposite side of the tree, with what appeared to me a small snake in its talons. To transfer the quarry from the drooping feet into its beak, drop it into the gaping mouth of its offspring, and to take a header, with closed wings, out of the nest (fortunately on my side), was the work of a moment; and a very beautiful sight it was. A lucky snap-shot, and I was actually guilty of the double crime of murder as well as robbery. The old bird proved to be a female on dissection; she was devoid of any spots or markings, and accords exactly with the description of the fully adult bird given at page 622, P. Z. S. for 1872.

---

* I should mention that my men had not met with a single Spotted Eagle on this occasion. Not only had the largest trees in this neighbourhood been cut down, but the country was sufficiently parched to drive the marsh-loving *A. nævia* into more genial regions.

The little downy creature, not more than fifteen days old, according to my data, was safely let down in a wicker basket, and looked so delicate that I was apprehensive of being able to rear it. Imagine my surprise on finding a five-inch tail of a lizard (which I had taken for a snake) dangling out of one side of its mouth! The head and body of this dainty morsel were no further than the throat, so that by gently pulling it out, I was able to identify it as *Calotis versicolor*. While waiting for a shot, I observed that the little inmate of the nest was particularly clean in its habits, and used to eject its *fæces* right over the side of the nest.

We now retraced our footsteps to the first nest, every now and again watching the gradual disappearance of the lizard's tail. In a quarter of an hour the little creature again commenced yelping for food, and began to peck at my fingers; but the country was so dreadfully dried up that no reptilian, not even a frog, was procurable. I therefore shot a Dove, which, to my delight, was devoured as quickly as it could be cut up.

By 4 P.M. I was in possession of the squab belonging to the first nest above alluded to; and these two gave me incessant work for the remainder of the day. Before evening they had demolished three Doves and two Minas, and they were quite game to eat by candle-light as well.

The following morning I was far from fit for any further exposure to the sun, as the frequent yelping of the Eaglets, which I was obliged to keep in an open basket at my bed-side, coupled with the heat, did not suffer me to have much rest. The taking of the third nest therefore devolved on Ungun; and it was with no little pleasure that I welcomed him back by nightfall with the third youngster, along with one of the parent birds. This one, too, proved to be a female, and was fully adult, without the slightest indication of spots, either on the wings or head, or any striation on the underparts. The plumage was a good deal faded and worn, especially the tail-feathers and primaries; the tibial plumes were incrusted with dry mud, caused, no doubt, by its hunting for reptile food in moist ground.

I cannot say much for the architectural skill of this Eagle. The nests I examined, as regards size and appearance, were very similar to those that are built by the common Kite; they differed in one material point, viz. that they were placed near the top of the tree, so as to command a good view of the country. All seven were built on good-sized (but not the largest) Sisso trees (*Dalbergia sisso*), and in every instance on the banks of the canal, adjacent to which, in ordinary seasons, there are pools of water and small marshes such as *Aquila nævia* and *A. hastata* delight in. My first nest was actually built on a tree overlooking the roadway, or *puttree*, on the edge of which the inhabitants of a small village were in the habit of bathing.

A curious feature in the nidification of this Eagle yet remains to be recorded, viz. that it lays a single egg. This is not only the result of my own investigation, but Mr. Brooks's collectors, who procured several eggs the previous season, bear me out in the conclusion I have arrived at. Captain Marshall, too, who was stationed for some time at Saharunpore, informs me that one egg is the normal number.

My return trip had now to be arranged; and, as bad luck would have it, I was doomed to travel by rail during the day. Leaving Saharunpore by the midday train of the 1st July, with the flesh of six chickens packed in ice, I reached Shekoabad on the forenoon of the following day. For the remainder of the journey (another eighty miles) I was fortunately my own master, and could stop my travelling carriage for the purpose of shooting small birds as often as was necessary. But it is strange that I have never once succeeded in prevailing on these Eagles (and two of them are now sixteen months old*) to partake of reptile food in any form whatever. This doubtless may be accounted for by my "*blooding*" them with such dainty morsels when first fed by the hand, in the same way as man-eating tigers and crocodiles are said to acquire a decided penchant for the flesh of the human form divine when once partaken of.

XIII.—*Synopsis of the Species of the Subfamily* Diglossinæ.

By P. L. Sclater, M.A., F.R.S.

(Plates IV., V.)

The genus *Diglossa* was instituted by Wagler in 1832 for the reception of a little bird of which specimens had been obtained in Mexico by Dr. Petz and deposited in the Museum of Würtzburg. Wagler referred the bird, somewhat doubtfully, to his Order "Corvi," and gave an accurate diagnosis of both sexes. He called it very appropriately *Diglossa*, from its divided tongue, and *baritula*, from the peculiar hook of the upper mandible, which reminded him of the genus *Barita*.

In 1838 Prince Charles Bonaparte described the same bird in the 'Nuovi Annali delle Scienze Naturali,' published at Bologna, and, not being aware of Wagler's prior designation, proposed to call it *Agrilorhinus sittaceus*. The term *Agrilorhinus* (which has been variously written by subsequent authors) was probably intended to have been *Ancylorhinus* (ἀγκύλος and ῥίς). Prince Bonaparte's types were specimens collected by Signor F. Sirletto in Mexico, and were believed to have been destined for the Museum of Florence. I do not know whether they were ever placed in that institution.

---

* One of the three I made into a specimen immediately it was fully plumaged, in order to demonstrate what the nestling bird is like; the second has just completed its moult, and I grieve to think that a similar fate awaits it; the third I should like to see placed in the Zoological Gardens.

In the same year the second part of the synopsis of the birds collected by D'Orbigny in South America, prepared by himself and Lafresnaye, was published in the 'Magazin de Zoologie.' D'Orbigny had obtained two species of this same genus of birds in the Andes of Bolivia; and the generic term *Serrirostrum* (from the slight serrations on the edges of the mandibles) was now proposed for them. In 1839 Lafresnaye, while again describing *Diglossa baritula* under a different name, proposed to change the generic term *Serrirostrum* into *Uncirostrum*. Three years later Dr. Hartlaub* showed that these various names were identical, and established the priority of *Diglossa*, which has since been generally accepted.

In 1837, or thereabouts, as is stated to me in a kind communication received from Dr. Cabanis, Lichtenstein was intending to designate this genus "*Campylops*." But this term was suppressed, and never actually published until 1851, when it was referred to as a synonym of *Diglossa* in the 'Museum Heineanum.'

In 1846 Lafresnaye gave a list of the eleven species of *Diglossa* known to him in the 'Revue Zoologique' (p. 317 *et seqq.*).

In 1864 the late Mr. Cassin gave an account of the species of this genus represented in the Museum of the Academy of Natural Sciences of Philadelphia†, and very needlessly proposed subgeneric titles for the different divisions into which he separated the group.

About the beginning of 1840, when birds' skins first began to be received from Bogota, Mr. Fraser, in this country, and the Baron de Lafresnaye, in France, described several new species of *Diglossa* from this district at nearly the same date. Since then a few others have been discovered in various parts of the range of the Andes (one of which, *D. plumbea*, occurs north of Panama), and a single species has been found in the mountain-range of British Guiana. Altogether we are now acquainted with fifteen well-marked species of this genus.

Of the closely allied form *Diglossopis*, which was first described by the writer in 1856, only a single species is known. I believe this bird is frequently passed over as the female or young of *D. personata*; but a careful examination soon shows the difference.

---

* Rev. Zool. 1842, p. 56.

† Pr. Acad. Sc. Phil. 1864, p. 273.

These two genera together constitute a very well-marked section of the purely Neotropical family Cœrebidæ, characterized by their hooked upper mandible. Lafresnaye pointed out this as their natural place in the series many years ago*; and it is surprising that some authors† should have thought of annexing them to the Dendrocolaptidæ, with which they have really no sort of connexion.

The two genera of Diglossinæ may be separated as follows :—

Rostro crassiore, gonyde ascendente .... 1. *Diglossa.*
Rostro tenuiore, elongatiore, gonyde recto .... 2. *Diglossopis.*

I now proceed to give an account of the species of these two genera known to me, based mainly on the study of the series in my own collection and that of Messrs. Salvin and Godman. I have likewise cursorily examined the specimens in the British Museum.

Genus I. DIGLOSSA.

Diglossa, Wagler, Isis, 1832, p. 280: type *D. baritula.*

"*Campylops,* Licht. MS.," Cab. Mus. Hein. i. p. 96: type *D. baritula.*

Uncirostrum, Lafr. Rev. Zool. 1839, p. 100: type *D. carbonaria.*

Agrilorhinus, Bp. Nuovi Ann. Sc. Nat. i. p. 408 (1838): type *D. baritula.*

Serrirostrum, Lafr. et d'Orb. Syn. Av. ii. p. 25 (1838): type *D. carbonaria.*

Tephrodiglossa, Cassin, Pr. Ac. Phil. 1864, p. 273: type *D. carbonaria.*

Pyrrhodiglossa, ej. ibid.: type *D. mystacalis.*

Cyanodiglossa, ej. ibid.: type *D. personata.*

Melanodiglossa, ej. ibid.: type *D. lafresnayi.*

---

* Rev. Zool. 1839, p. 100, et 1846, p. 319.

† *E. g.* G. R. Gray in his 'List of Genera of Birds' (ed. 2), p. 23 *et alibi.*

The fifteen species of this genus may be divided as follows:—

Sect. I. DIGLOSSÆ RUFO-PICTÆ.

a. abdomine rufo, crisso concolori.	
gula plumbea	1. *baritula.*
gula concolori rufa	2. *sittoides.*
gula omnino nigra	3. *gloriosa.*
gula med. nigra, utrinque rufa	4. *brunneiventris.*
b. abdomine nigro, crisso rufo.	
torque pectorali rufo: mystacibus albis	5. *pectoralis.*
torque nullo, mystacibus rufis	6. *mystacalis.*
c. abdomine cinereo, crisso rufo.	
pectore nigro	7. *carbonaria.*
pectore et ventre concoloribus	8. *major.*

Sect. II. DIGLOSSÆ HOMOCHROÆ.

d. supra subtusque nigræ.	
campterio cærulescente	9. *lafresnayi.*
campterio cano	10. *humeralis.*
campterio nigro	11. *aterrima.*
campterio albo	12. *albilateralis.*
e. supra subtusque plumbea	13. *plumbea.*
f. supra subtusque cæruleæ	
facie nigra	14. *personata.*
facie concolori	15. *indigotica.*

1. DIGLOSSA BARITULA.

Diglossa baritula, Wagl. Isis, 1832, p. 281; Hahn, Orn. Atl. xii. tab. 1 et 2; Hartl. Rev. Zool. 1842, p. 56; Gray, Gen. B. pl. 42; Bp. Consp. p. 401; Sclater, P. Z. S. 1856, p. 286, et 1864, p. 173, et Cat. A. B. p. 48; Cab. Mus. Hein. p. 97; Sclater et Salvin, Ibis, 1859, p. 14; Reich. Handb. p. 233, t. dliv. f. 3762, 3763; Cass. Pr. Ac. Phil. 1864, p. 273; Scl. et Salv. Nomencl. p. 15.

Campylops hamulus, Licht. MS.

Uncirostrum brelayi, Lafr. Rev. Zool. 1839, p. 100.

Uncirostrum sittaceum, Lafr. ib. p. 292.

Anchilorhinus sittaceus, Bp. Nuov. Ann. Sc. Nat. Bologna, i. p. 408 (1838).

Suprà plumbea, capite alis et caudâ obscurioribus: subtùs ferruginea: gulâ plumbeâ: subalaribus ferrugineis, remigum marginibus internis albicantibus: rostro obscuro, mandibulâ inferiore carneâ, pedibus corylinis: long. tota 4·5, alæ 2·4, caudæ 1·9. *Fem.* flavicanti-olivacea, alis caudâque fuscis olivaceo limbatis: subtùs fuscescenti-ochracea, ventre medio dilutiore.

Hab. S. Mexico and Guatemala.

Mus. P. L. S. et S.-G.

As already shown above, this most northern representative of the *Diglossæ* was first described by Wagler, next by Bonaparte, and then by Lafresnaye, under different generic and specific names. Dr. Hartlaub was the first to recognize the identity of these synonyms. Figures of both sexes are given by Hahn in his Ornithological Atlas and by Reichenbach in his Coloured Plates of Birds.

The range of *D. baritula* extends over Southern Mexico and Guatemala, but not further south. It is met with in most Mexican collections from the interior, but does not appear to be found in the lower forests of the sea-coast. Sallé obtained it near Cordova, De Oca near Jalapa. Sumichrast, in his memoir on the distribution of the birds of Vera Cruz*, refers this species to the "Alpine Region," and says:—

"I consider the alpine region as the real centre of propagation of this bird. I have there found it at the height even of 3000 metres. It is not very rare in the more elevated parts of the canton of Orizaba. Its general habits and its manner of feeding are analogous to those of the Trochilidæ. It is known by the common names of *Mielero*, or Honey-eater, and *Pico-chueco*, or Distorted-beak."

In Guatemala, Mr. Salvin tells me, this bird is found on all the mountains ranging above 6000 feet. He obtained it himself in Vera Paz and on the slopes of the Volcan de Fuego. It frequents bushes and the edges of the forests. It is very restless in its movements amongst the branches in search of food, and goes either singly or in small families.

2. Diglossa sittoides.

Serrirostrum sittoides, Lafr. et D'Orb. Syn. Av. ii. p. 25; D'Orb. Voy. Ois. p. 374, t. 58. fig. 2.

---

* Mem. Boston Soc. N. H. i. p. 542 (1869).

Diglossa sittoides, Bridges, P. Z. S. 1847, p. 29; Reich. Handb. p. 233, t. dliv. f. 3766; Cassin, Pr. Acad. Phil. 1864, p. 273; Scl. et. Salv. Nomencl. p. 15; Tacz. P. Z. S. 1874, p. 511.

Diglossa similis, Lafr. Rev. Zool. 1846, p. 318; Sclater, P. Z. S. 1855, p. 138, et 1868, p. 170, et Cat. A. B. p. 48; Bp. Consp. p. 401; Reich. Handb. p. 233, t. dliv. f. 3764; Cass. Pr. Ac. Phil. 1864, p. 273; Scl. et Salv. Nomencl. p. 15.

Diglossa hyperythra, Cab. Mus. Hein. i. p. 97. (1850) (ex Venezuela).

Uncirostrum d'orbignii, Boiss. Rev. Zool. 1840, p. 5.

Diglossa d'orbignyi, Reich. Handb. p. 233.

Suprà plumbea, fronte et lateribus capitis paulò obscurioribus, alis et caudâ intùs nigricantibus, plumbeo angustè marginatis: subtùs omninò saturatè ochracea unicolor: rostro corneo, mandibulâ inferiore albicante: pedibus flavidis: long. tota 4·4, alæ 2·25, caudæ 1·8. *Fem.* olivacea, alis caudâque fuscis olivaceo limbatis, illarum fasciâ obsoletè ochraceâ: subtùs fuscescenti-ochracea.

Hab. Venezuela, Columbia, Ecuador, Peru, and Bolivia.

Mus. P. L. S. et S.-G.

D. sittoides was one of the two species of this genus obtained by D'Orbigny in Bolivia, and first described by him and Lafresnaye in 1838. D'Orbigny collected specimens at various points on the Eastern Cordillera of that country, at Chupé, in the province of Yungas, and near the cities of Chuquisaca and Valle Grande. Bridges met with it also in Bolivia, at altitudes of from 8000 to 10,000 feet in the province of Cochabamba.

In 1848 Lafresnaye founded a second species of *Diglossa* upon Bogota skins, to which he gave the very appropriate name of *D. similis*, from its striking resemblance to the Bolivian *D. sittoides*. Lafresnaye states various minute points of difference between the two forms; but upon comparison of the series now before me (consisting of nine individuals from different localities), I find that none of these points holds good. Besides that, we have since discovered that this species occurs not only in Columbia and Bolivia, but also in the intermediate countries of Ecuador and Peru, and likewise extends into Venezuela. Several skins from the vicinity of Quito are in Salvin and Godman's collection. Jelski obtained specimens in the Junin district of Central Peru; and Goering has sent us skins from the neighbourhood of Caracas, in Venezuela. Upon comparing these with a Bolivian example in my collection, which was obtained by Mr. David Forbes, F.R.S., at Chichalula, in the province of Yungas, in June 1861, I can find no differences worthy of record. In Bogota skins there is certainly a rather darker hue on the front and sides of the head, and the dimensions are perhaps slightly inferior; but regarding the series as a whole, I see no grounds whatever for specific separation.

Mr. Cassin (*l. s. c.*), though he does not actually unite *D. sittoides* and *D. similis*, seems to have been of the same opinion.

3. DIGLOSSA GLORIOSA.

Diglossa gloriosa, Scl. et Salv. P. Z. S. 1870, p. 784, pl. 46, fig. 1, et Nomencl. p. 15.

Nigra, uropygio in cinereum trahente, abdomine medio castaneo: tectricibus alarum minoribus et superciliis indistinctis cærulescenti-canis: rostro nigro, pedibus corneis: long. tota 5·2, alæ 2·5, caudæ 2·2.

Hab. Andes of Merida, Venezuela.

Mus. P. L. S. et S.-G.

On his first expedition to Merida Mr. Goering obtained a single male specimen of this distinct *Diglossa* on the Paramo of La Culata.

During his second expedition to Merida, in 1873, Mr. Goering procured further examples of this species, like the former, of the male sex. The female is still unknown; and no other collector seems to have obtained the bird at all.

The nearest ally of *D. gloriosa* is the next species, from which, however, it is at once distinguishable by its wholly black throat, chest, and flanks, only the middle of the belly and crissum being of a dark chestnut brown.

Mr. Goering notes the iris of this species as "dark brown."

4. DIGLOSSA BRUNNEIVENTRIS.

Diglossa brunneiventris, Lafr. Rev. Zool. 1846, p. 318; Des Murs, Icon. Orn. pl. 43; Cassin, Pr. Acad. Phil. 1864, p. 274; Reich. Handb. p. 232, t. dliv. f. 3765; Scl. et Salv. P. Z. S. 1867, p. 984, et Nomencl. p. 15; Tacz. P. Z. S. 1874, p. 511.

Suprà nigra, scapularibus et uropygio cineraceis: subtùs saturatè rufa, gulâ mediâ nigrâ, utrinque rufo limbatâ: lateribus et subalaribus cinereis: tibiis nigris: rostro et pedibus nigris: long. tota 5·5, alæ 2·8, caudæ 2·5. *Fem.* fusco-cinerea, dorso substriato, tectricum alarum marginibus pallidis: subtùs pallide ochraceo-fusca, gutture cinereo; pectore nigricante striato.

Hab. Andes of Peru.

Mus. P. L. S. et S.-G.

This *Diglossa* was first described by Lafresnaye in 1846, under a name given to it by Des Murs, who shortly afterwards figured it in his 'Iconographie Ornithologique.' Des Murs corrects Lafresnaye in assigning "Peru" as its locality, and states that he received his specimens from Gay, who brought them from Chili. But here, no doubt, Des Murs was mistaken. Chili, so far as we know up to the present time, is beyond the range of *Diglossa*, and it is much more likely that Gay's examples were procured in Peru.

Mr. Whitely obtained specimens of *D. brunneiventris* (from which my description has been taken) first at Chihuata, between Islay and Arequipa, at an elevation of 9000 feet, and afterwards at Tinta and Paucartambo, in the Andes of Cuzco. Jelski collected many examples in the more northern part of the republic, in the district of Tarma. The series of six skins from these localities now before me shows considerable variation in size, the wing measuring 2·8 inches in some, and 2·5 only in others. The tint of the chestnut-red of the lower surface also varies in intensity.

The specimen described as the female of this species is one of Mr. Whitely's skins, procured at Paucartambo in February 1873. It is right to mention that one of M. Jelski's skins, marked as of this sex, is in nearly the same plumage as the male, but duller in colours. I suspect, however, that the latter is really a young male.

5. Diglossa pectoralis. (Plate IV.)

Diglossa pectoralis, Cab. Journ. f. O. 1873, p. 318; Tacz. P. Z. S. 1874, p. 511.

Nigra, uropygio et scapularibus cineracescentibus: mystacibus et plagâ quadratâ pectoris lacteo-albis, hujus limbo superiore et crisso saturatè rufis; rostro et pedibus nigris: long. tota 4·75, alæ 2·9, caudæ 2·4.

Hab. Andes of Peru.

Mus. Varsoviano.

This is a recent discovery of the Polish naturalist Jelski in the interesting part of Peru which he has lately explored—the vicinity of Tarma and Junin. M. Jelski obtained several specimens at Maraynioc in this district, but does not appear to have distinguished the species from *D. brunneiventris.* The figure is taken from one of these examples (belonging to the Museum of Warsaw), which M. Taczanowski has kindly sent me for examination.

6. Diglossa mystacalis.

Diglossa mystacalis, Lafr. Rev. Zool. 1846, p. 318; Bridges, P. Z. S. 1847, p. 29; Cassin, Pr. Acad. Phil. 1864, p. 274; Reich. Handb. p. 232, t. dlii. f. 3756; Bp. Consp. p. 401.

Diglossa mystacea, Gray & Mitch. Gen. of Birds, t. 42 (head).

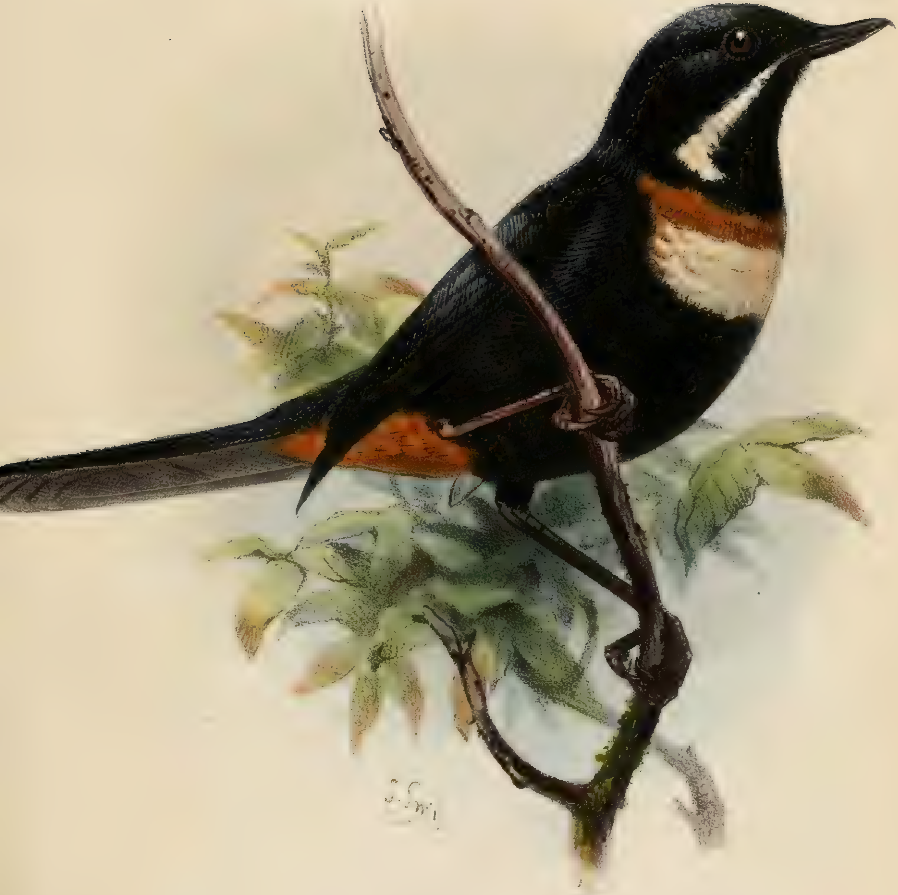
Nigra unicolor, campterio cano, subalaribus albis; mystacibus latis et crisso saturatè rufis: long. tota 6·0, alæ 2·8, caudæ 2·2.

Hab. Andes of Bolivia.

Mus. Brit.

For the discovery of this fine *Diglossa* we are indebted to the researches of Mr. Bridges, who obtained examples about the year 1844, during his travels in the province of La Paz. It was from one of these specimens, as it seems, that Lafresnaye described the species. Mr. Bridges subsequently published the following notes on the species:—

"Lives entirely in the thickets, hopping from bough to



J. Smit. lith

M & N Hanhart imp

DIGLOSSA PECTORALIS.

AMERICAN MUSEUM
CENTRAL PARK.
NEW YORK
NATURAL HISTORY.

bough, as if in pursuit of insects. I have often seen this species insert its bill into a scarlet and purple flower allied to the *Arbutus*; but whether for the purpose of capturing insects or of extracting honey I was not able to ascertain. Its habitat is the Yungas of La Paz.

"I believe that the specimen described by M. le Baron de Lafresnaye was from my collection."

I am not aware that any other traveller but Mr. Bridges has procured examples of this scarce species. My characters are taken from two specimens of his in the British Museum. Mr. Eyton's collection contains a skin from the same source. M. de Lafresnaye's type is now in the Museum of the Natural-History Society at Boston, U. S. A., where Mr. Salvin has examined it.

7. DIGLOSSA CARBONARIA.

Serrirostrum carbonarium, Lafr. et D'Orb. Syn. Av. ii. p. 25; D'Orb. Voy. Ois. p. 373, t. lviii. fig. 1.

Diglossa carbonaria, Bridges, P. Z. S. 1847, p. 29; Scl. et Salv. Nomencl. p. 15; Cassin, Pr. Ac. Phil. 1864, p. 273; Reich. Handb. p. 232, t. dlii. f. 3755, et t. dliii. f. 3760, 3761.

Nigra: tectricibus alarum minoribus, uropygio, subalaribus et ventre toto canescenti-plumbeis, crisso rubro: rostro nigro, pedibus carneis: long. tota 5·2, alæ 2·7, caudæ 2·0.

Hab. Andes of Bolivia.

Mus. P. L. S.

This species of *Diglossa* was discovered by D'Orbigny. He collected specimens at several localities on the eastern slope of the Bolivian Cordillera, at Cajapi in the province of Yungas, at Inquisivi in the province of Sicasica, and at Palca in the province of Ayupaya. Bridges, during his travels in Bolivia, likewise obtained examples of it at several places in Cochabamba, at altitudes of from eight to ten thousand feet.

Bridges gives us the following notes on this species and *D. sittoides*:—

"Birds of this genus are found in the temperate region, where the thickets commence, at an altitude of from 8000 to 10,000 feet. I found these species among bushes of *Salvia* and *Eupatorium*, on the slopes which fall into the valley of

Cochabamba, and most abundantly at a place called Ticquepaya. They have precisely the habits of Flycatchers. *D. carbonaria* I have watched often sitting motionless on the highest twig of a bush until he discovered a passing insect, on which he descended, and then returned to his post. I may mention that the vicinity of Cochabamba was the only district in which these two species occurred to me."

I have never seen the female of this species; but Reichenbach describes it from an example in the Dresden Museum as "above olive-grey brown, and below greyish white fringed with yellowish." The question, however, is whether the bird thus described is not the female of *D. sittoides*, which occurs in the same country.

8. DIGLOSSA MAJOR.

Diglossa major, Cab. in Schomb. Guian. iii. p. 676, et Mus. Hein. i. p. 98; Reich. Handb. d. Sp. Orn. p. 230, t. dli. *b*, f. 4065; Scl. et Salv. Nomencl. p. 15.

Supra nigra, lineis in plumarum scapis et remigum rectricumque marginibus obscurè cæruleis: capitis lateribus nigris; subtùs dorso concolor sed dilutior: alarum marginibus internis canis; crisso rubro: rostro plumbeo, pedibus corneis: long. tota 6·7, alæ 3·4, caudæ 3·2, rostri a rictu ·95.

Hab. Roraima Mountains, British Guiana, alt. 6000 feet. (*Schomb.*).

Mus. Berol. et P. L. S.

This, the largest and strongest of all the known species of *Diglossa*, has, so far as I am aware, never been obtained except by Schomburgk. The single specimen in my own collection was received from the Berlin Museum in exchange.

9. DIGLOSSA LAFRESNAYI.

Uncirostrum lafresnayi, Boiss. Rev. Zool. 1840, p. 4.

Diglossa lafresnayii, Sclater, P. Z. S. 1855, p. 138, et Cat. A. B. p. 49; Cab. Mus. Hein. p. 97; Bp. Consp. p. 401; Reich. Handb. p. 231, t. dliii. f. 3757; Cass. Pr. Ac. Phil. 1864, p. 274; Scl. et Salv. Nomencl. p. 15.

Agrilorhinus bonapartii, Fraser, P. Z. S. 1840, p. 22.

Diglossa intermedia, Cab. Mus. Hein. p. 97; Reich. Handb. p. 231 (?).

Atra unicolor: tectricibus alarum minoribus cærulescenticanis, subalaribus partim cinereis: long. tota 5·8, alæ 3·0, caudæ 2·5, rostri a rictu 0·75.

Hab. Columbia and Ecuador.

Mus. P. L. S. et S.-G.

10. DIGLOSSA HUMERALIS.

Agrilorhinus humeralis, Fraser, P. Z. S. 1840, p. 22.

Diglossa humeralis, Cab. Mus. Hein. p. 27 (note); Reich. Handb. p. 231, t. dlii. f. 3754; Cassin, Pr. Ac. Phil. p. 275; Wyatt, Ibis, 1871, p. 324; Scl. et Salv. Nomencl. p. 15; Scl. Cat. A. B. p. 49.

Nigra, uropygio cineraceo: tectricibus alarum minoribus canis: subalaribus nigris: long. tota 5·7, alæ 2·7, caudæ 2·4.

Hab. Columbia and Ecuador.

Mus. P. L. S. et S.-G.

After much deliberation I had almost come to the conclusion that the only reasonable plan was to unite the species commonly called *D. lafresnayi* and *D. humeralis* under one name. They occur in the same countries, and are usually stated to differ only in size—a very uncertain character in this genus. Moreover, as will be seen by the subjoined table of measurements, there is really not much difference in this respect when a series is examined. But there are certainly to be recognized the slight differences pointed out in the diagnosis, viz. that in *D. lafresnayi* the bend of the wing is of a much brighter bluish tinge, the rump is quite black, like the back, and the under wing-coverts are more or less ashy. I propose, therefore, for the present to leave the two so-called species apart, though it is quite possible *D. humeralis* may be the female.

Mr. Wyatt obtained *D. humeralis* at a height of 9000 feet in the Andes of Ocaña. It is also common in "Bogota" and "Quito" collections.

The subjoined Table gives the dimensions of ten skins of these two birds in my own collection and that of Messrs. Salvin and Godman.

Diglossa lafresnayi.

Mus.	Patria.	Long. tota.	L. alæ.	L. caudæ.
P. L. S.	Columbia	5·8	3·0	2·45
P. L. S.	Columbia	5·5	2·8	2·5
S.-G.	Columbia	5·5	3·0	2·5
S.-G.	Ecuador	5·4	2·8	2·4
S.-G.	Ecuador	4·5	2·6	2·0

Diglossa humeralis.

Mus.	Patria.	Long. tota.	L. alæ.	L. caudæ.
P. L. S.	Ecuador	5·7	2·7	2·4
S.-G.	Ocaña (*Wyatt*) ..	5·0	2·8	2·5
S.-G.	Columbia	4·5	2·4	2·0
P. L. S.	Columbia	4·8	2·5	2·1
P. L. S.	Columbia	4·6	2·7	2·1

11. DIGLOSSA ATERRIMA.

Diglossa aterrima, Lafr. Rev. Zool. 1846, p. 319; Bp. Consp. p. 401; Sclater, P. Z. S. 1855, p. 138, et 1858, p. 551, et Cat. A. B. p. 49; Reich. Handb. p, 232, t. dliii. f. 3759; Cassin, Pr. Ac. Phil. 1864, p. 275; Scl. et Salv. Nomencl. p. 15.

Atra unicolor; rostro et pedibus nigris: long. tota 5·5, alæ 2·7, caudæ 2·5. *Fem.* minor et subfuscescentior.

Hab. Andes of Ecuador.

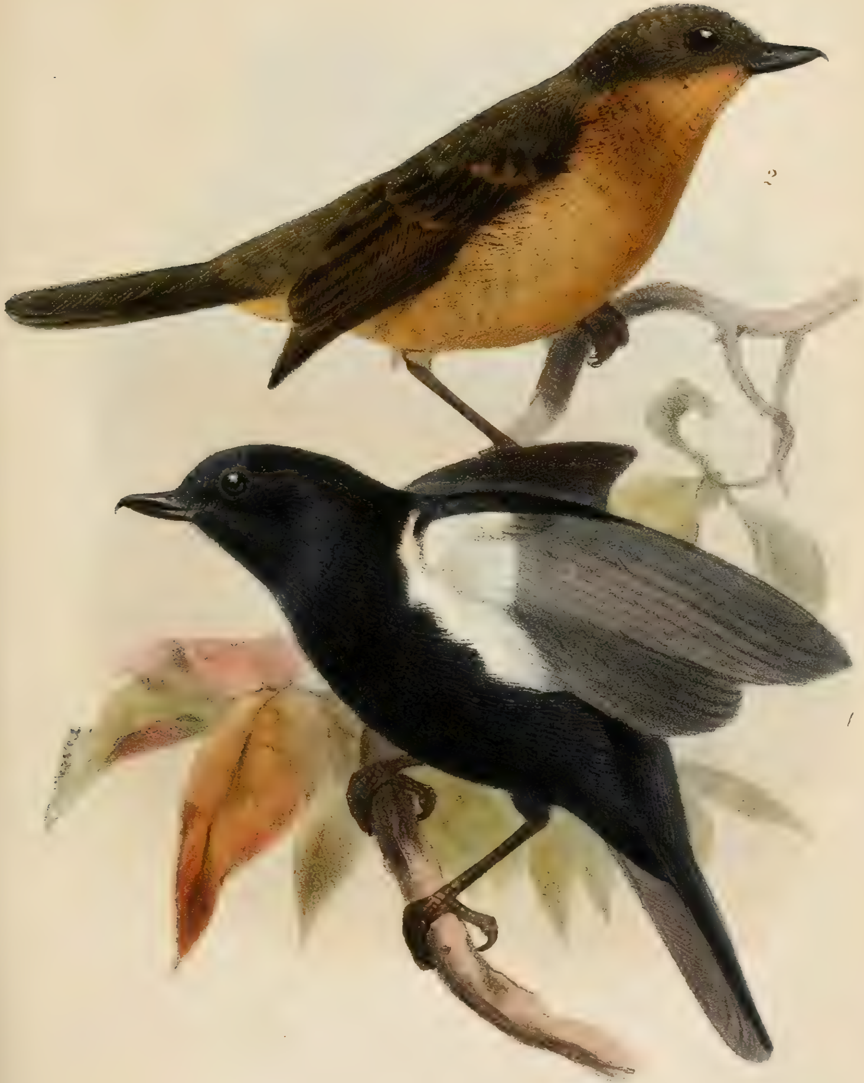
Mus. P. L. S. et S.-G.

Mr. Fraser obtained specimens of this species at Titiacun and Matos, both high up on the plateau of Riobamba and from 10,000 to 12,000 feet above the sea-level. He says it is found "on the bushes and trees on the hill-side, is very restless, and has a very pretty song." The original types described by Lafresnaye were procured at Parlo, within the confines of Columbia (probably by Delattre); but I do not think the species ever occurs in Bogota collections, nor have I seen it from any part of Peru.

12. DIGLOSSA ALBILATERALIS. (Plate V. figs. 1 ♂, 2 ♀.)

Diglossa albilateralis, Lafr. Rev. Zool. 1843, p. 98, et 1846, p. 317; Sclater, P. Z. S. 1855, p. 138, et 1859, p. 138, et Cat. A. B. p. 48; Bp. Consp. p. 401; Cassin, Pr. Ac. Phil. 1864, p. 275; Scl. et Salv. P. Z. S. 1870, p. 780, et Nomencl. p. 15; Wyatt, Ibis, 1871, p. 324.

Agrilorhinus olivaceus, Fraser, P. Z. S. 1840, p. 22 (♀?).



J. Smit lith. Hanhart imp.

DIGLOSSA ALBILATERALIS. ♂ ♀.

Cineraceo-nigra unicolor: subalaribus et lateribus candidis: rostro et pedibus nigris; long. tota 4·5, alæ 2·3, caudæ 2·0. *Fem.* olivaceo-brunnea, subtùs rufescenti-ochracea, lateribus candidis.

Hab. Andes of Venezuela, Columbia, and Ecuador.

Mus. P. L. S. et S.-G.

This *Diglossa* was first described in 1843 by Lafresnaye, from Bogota skins. It extends along the Andes on the one side into Ecuador, where examples were collected by Fraser at several localities not far from Quito, and in the other direction into Venezuela, whence Mr. Goering has transmitted specimens from the lower wood-region of Merida. Mr. Salmon obtained it in the state of Antioquia, and Mr. Wyatt on his excursion to the Andes of Ocaña; so that it seems to be pretty widely distributed.

I have a young male (collected by Fraser in April 1859, above Puellaro, in Ecuador) which clearly connects the somewhat dissimilar male and female plumages of this species.

The figures (Pl. V.) are taken from specimens of this species collected by Mr. Salmon—the male now in Salvin and Godman's collection, the female in my own.

13. DIGLOSSA PLUMBEA.

Diglossa plumbea, Cab. Journ. f. Orn. 1860, p. 411; Salvin, P. Z. S. 1870, p. 185; Cassin, Pr. Ac. Phil. 1854, p. 275; Scl. et Salv. Nomencl. p. 15.

Plumbea, capite alis et caudâ obscurioribus: subtùs dilutior, in ventre medio albescens: rostro obscuro, mandibulâ inferiore ad basin corneâ, pedibus fuscis: long. tota 4·3, alæ 2·2, caudæ 1·6. *Fem.* olivacea, alis caudâque fuscis ochraceo marginatis: subtùs valdè dilutior, abdomine ochraceo lavato.

Hab. Costa Rica and Veragua.

Mus. P. L. S. et S.-G.

This *Diglossa* was originally described by Dr. Cabanis from a single male specimen transmitted by Dr. v. Frantzius from Costa Rica. I have a skin obtained in the same country by Dr. van Patten. More recently Arcé has collected a good series of both sexes of this species on the southern slopes of the Volcano of Chiriqui, showing that its range extends into Veragua.

14. Diglossa personata.

Agrilorhinus personatus, Fraser, P. Z. S. 1840, p. 22.

Uncirostrum cyaneum, Lafr. Rev. Zool. 1840, p. 102.

Diglossa cyanea, Bp. Consp. p. 401.

Diglossa melanopis, Tsch. in Wiegm. Arch. x. 1, p. 294.

Diglossa personata, Hartl. Syst. Verz. p. 19; Sclater, P. Z. S. 1855, p. 138, 1858, p. 551, et 1859, p. 138, et Cat. A. B. p. 49; Jard. Contr. 1849, p. 44; Reich. Handb. p. 231, t. dlii. f. 3752; Tsch. F. P. Orn. p. 237; Cassin, Pr. Ac. Phil. 1864, p. 274; Cab. Mus. Hein. p. 98; Tacz. P. Z. S. 1874, p. 511; Scl. et Salv. Nomencl. p. 15.

Obscurè cærulea, alis caudâque nigris cæruleo limbatis: fronte et capitis lateribus nigris: rostro et pedibus nigris: long. tota 5·8, alæ 3·0, caudæ 2·5. *Fem.* paulo minor, long. tota 5·0, alæ 2·7, caudæ 2·1.

Hab. Andes of Columbia, Ecuador, and Peru.

Mus. P. L. S. et S.-G.

This *Diglossa* was described by Mr. Fraser in this country, and by M. de Lafresnaye in France, almost simultaneously; but precedence is usually assigned to the former author's name. It is by no means uncommon in "Bogota" collections; and Mr. Salmon has sent many specimens from the state of Antioquia in the same Republic. Mr. Salmon's were obtained at Retiro, near Medellin, at an altitude of about 7000 feet above the sea-level.

Proceeding to the Republic of Ecuador, we find this bird recorded by Jameson* as met with in the "forests on the eastern side of Pichincha, in the cold region." Mr. Fraser also obtained it at Matos, Pinipi, and other high spots in the same district "amongst the trees on the mountains." He marks the irides as "red." He likewise subsequently collected specimens at Pallatanga at a lower elevation. The species also occurs in the Andes of Northern Peru, as recorded by Tschudi and Jelski, who both met with it in the same district.

15. Diglossa indigotica.

Diglossa indigotica, Sclater, Ann. & Mag. N. H. ser. 2,

* Contr. Orn. 1849, p. 44.

xvii. p. 467; P. Z. S. 1860, p. 85; et Cat. A. B. p. 49; Cassin, Pr. Ac. Phil. 1864, p. 274; Scl. et Salv. Nomencl. p. 15.

Saturatè purpureo-cærulea unicolor; loris nigris: alis caudâque nigris cæruleo limbatis: rostro et pedibus nigris: long. tota 4·3, alæ 2·2, caudæ 1·4.

Hab. Andes of Ecuador.

Mus. P. L. S.

This *Diglossa* was first described by me in 1856, from a specimen received from Verreaux, of Paris. It is a very well-marked species, to be recognized at once by its uniform purplish colour, without the black face of *D. personata.* In 1859 Fraser obtained examples of it at Nanegal, a village on the western slope of Pichincha, at an altitude of 4000 feet. One of them, together with the type of the original description, is in my collection. Mr. Fraser marks the iris of this species as "dark red."

Genus II. Diglossopis.

Diglossopis, Sclater, Ann. N. H. ser. 2, xvii. p. 467 (1856): type *D. cærulescens.*

Diglossopis cærulescens.

Diglossopis cærulescens, Sclater, Ann. & Mag. N. H. ser. 2, xvii. p. 467; Scl. et Salv. P. Z. S. 1868, p. 627, et Nomencl. p. 15; Wyatt, Ibis, 1871, p. 324.

Diglossa personata ♀, Reich. Handb. p. 231, t. dlii. f. 3753.

Cærulescenti-cinerea ferè unicolor, subtùs in ventre dilutior: alis caudâque intus nigricantibus: loris et rostri ambitu obscuris: rostro nigro, pedibus fuscis: long. tota 6·0, alæ 2·9, caudæ 2·3.

Hab. Andes of Venezuela and Columbia.

Mus. P. L. S. et S.-G.

This curious bird is, I believe, often regarded as the female of *D. personata**, and has been figured and described as such by Dr. Reichenbach. Dr. Hartlaub first drew my attention to it in 1854 at Bremen. Subsequently I found skins at

---

* Mr. Salvin tells me that two of the specimens in the Lafresnaye collection, now at Boston, marked "*D. personata* ♀," are of this species, i. e. *D. cærulescens.*

DIGLOSSINARUM

Tabula distributionis geographicæ.

Mexico et Guatemala.	*Costarica et Veragua.*	*Columbia.*	*Venezuela.*	*Ecuador.*	*Peru.*	*Bolivia.*	*Guiana.*
D. baritula.							
		D. sittoides.	D. sittoides. D. gloriosa.	D. sittoides.	D. sittoides.	D. sittoides.	
					D. brunneiventris. D. pectoralis.		
						D. mystacalis. D. carbonaria.	D. major.
		D. lafresnayi.		D. lafresnayi. D. aterrima.			
	D. plumbea.	D. albilateralis.	D. albilateralis.				
		D. personata.		D. personata. D. indigotica.	D. personata.		
		D. cærulescens.	D. cærulescens.				

Paris, in Mr. Levraud's extensive collection sent to the Jardin des Plantes from Caracas, where M. Sallé and Mr. Goering also obtained specimens. Mr. Wyatt met with it on his journey into the Andes of Ocaña, and tells us that he found it in the forests, at an altitude of about 7000 feet, at Portrerras, and at two or three other localities between Ocaña and Bucaramanga. He describes the iris as "light red." The species is also not very infrequent in "Bogota" collections; but I have never seen it from Ecuador or Peru.

XIV.—*Notes on a 'Catalogue of the* Accipitres *in the British Museum,' by* R. Bowdler Sharpe (1874). By J. H. Gurney.

[Continued from page 96.]

Passing on to the genus *Polyboroides,* which Mr. Sharpe places at the head of the Accipitrinæ, I may remark that, in his description of the adult female of *P. typicus,* Mr. Sharpe does not mention that the transverse bands on the lower parts, and especially on the tibial feathers, are much narrower and closer together in some adult females (probably very old birds) than in the ordinary adult plumage of both sexes; such a female was figured and described as specifically distinct under the name of *Gymnogenys malzacii* by the late MM. J. and E. Verreaux in the Rev. et Mag. de Zoologie for 1855, from a specimen in the Norwich Museum, which was obtained in Nubia; and the same museum also contains a similar female from Natal.

In treating of the Harriers, Mr. Sharpe comprises all the known species of this group under the genus *Circus,* which is probably a judicious course, as, although that genus seems to be naturally divisible into distinct sections (probably four in number), it would be difficult to define these satisfactorily without a fuller acquaintance than we at present possess with such variations of coloration as are incident to the sexes and successive ages of each species.

It may be a convenient course, in arranging my observations upon the genus *Circus,* to commence with the British

Harriers, as some of my remarks will be more or less applicable to all the three species which occur in this country; I will therefore, in the first instance, refer to *C. cyaneus*—in regard to which I think that Japan should be added to the localities given by Mr. Sharpe, as there are two females from that country preserved in the museum at Leyden, which, when I examined them in 1869, appeared to me to be referable to this species; it is, however, right to add that Professor Schlegel, in the 'Museum des Pays-Bas,' *Circi* (p. 2), quotes these specimens as examples of *Circus hudsonicus**.

In the three British Harriers, the colour of the iris in the adult birds is always a clear yellow in the males, and usually a yellowish brown in the females; but it would seem that in the latter, as they become aged, the colour of the iris approaches nearer to that of the male bird, and that this is especially the case in Montagu's Harrier†, in which species the females appear also occasionally to assume, more or less completely, the grey plumage which always distinguishes the adult males. Mr. Sharpe has an important footnote attached to his article on this species (*vide* p. 66), from which it would seem that he has examined "grey-plumaged" specimens of this Harrier which, as indicated by their measurements, must, in all probability, have been female birds; and Mr. E. H. Rodd has recorded in the 'Zoologist' for 1852, at p. 3475, a Montagu's Harrier, obtained in April of that year on the

---

* In the same passage Professor Schlegel mentions two supposed specimens of *C. hudsonicus* from the Philippines which are preserved in the Leyden Museum. These are in reality immature examples of *C. melanoleucus*. I have already alluded to this circumstance in 'The Ibis' for 1870 (p. 445), and should not have again referred to it had not the original error been recently reproduced in Messrs. Baird, Brewer, and Ridgway's valuable 'History of North-American Birds' (vol. iii. p. 218).

† Mr. Sharpe is of opinion that this species is entitled to bear the specific name *pygargus*, for reasons which he gives in a footnote at p. 64 of his Catalogue. In his synonymy of this species Mr. Sharpe omits to mention that the specific name of *cineraceus* was used by Montagu in 1802 (*vide* Orn. Dict. i. sheet F), as quoted by Professor Newton in his edition of 'Yarrell's British Birds' (i. p. 138).

Scilly Islands, which proved on dissection to be a female, having "the ovarium filled with eggs, but not much developed," in which "a decided tone of blue pervaded a great many of the scapulary feathers," and the irides were "bright yellow," as in an adult male.

The subject of the sexual distinction of colour in the irides of some of the Harriers is an interesting one; and it may be hoped that ornithologists in India, and in other countries where various species of the genus *Circus* are more abundant than in England, will avail themselves of as many opportunities as possible of recording observations bearing upon it*.

In regard to *Circus æruginosus*, Mr. Sharpe's description of the plumage of the adult male is very full and excellent, though I suspect that it has been taken from a slightly faded specimen; but with reference to the coloration of the immature birds and of the adult females, some additional remarks may not be out of place.

The "creamy buff" or luteous colouring of the upper portion of the head is much clearer in what may be called the normal immature plumage of this species than in the adults of either sex, owing to the darker shaft-marks of the luteous feathers being very narrow and often almost imperceptible in young birds, whereas in those which are adult these marks are always broader and more conspicuous. In most young birds the luteous colouring forms a cap over the whole upper surface of the head, but in some it is either entirely absent or only represented by a few fulvescent feathers at the back of the head, its place being occupied by plumage of a dark chocolate-brown; and an instance is recorded in Hunt's 'British

---

* In reference to this subject I may quote two notes on South-African Harriers. In 'The Ibis' for 1871 (p. 148), Mr. Ayres records the iris of a female *Circus swainsoni* as dark hazel; in this case the sex was ascertained by dissection, and the bird, which I examined, appeared to be in adult plumage. In 'The Ibis' for 1874 (p. 359), Mr. Buckley records two females of *Circus ranivorus*, in one of which the iris was hazel, the beak being black, whilst in the other, which was no doubt the older bird, the iris was light yellow and the beak horn-colour. It would seem probable that in those Harriers in which, as in *C. ranivorus*, the sexes are alike, both have yellow irides when fully adult.

Birds' (vol. i. p. 50) of two individuals, which were reared from the same nest, of which one had the upper portion of the head "bright luteous," whilst in the other it was a "dark chocolate-colour."

The rufous mottlings on the tails of immature specimens, to which Mr. Sharpe alludes, does not extend (so far as I have observed) to the two central rectrices, but is more or less present in all the others, and in some young males assumes the character of irregular transverse bars. In other immature males, but more advanced towards the adult stage, and in which these rufous markings have disappeared and the whole tail has become grey, it is crossed by a band of darker grey, about half an inch in breadth, and about that space from the extremity of the tail, which extends across all the rectrices.

The ordinary plumage of the adult female only differs from the normal immature dress of both sexes in the broader shaft-markings on the head, to which I have already alluded; these, however, in many female specimens, are less conspicuous than in the adult males. The British Museum possesses an example which, by its measurements, appears to be a female, but which, in the tinge of grey on its wings and tail, as well as in the general character of its plumage, somewhat resembles the adult male, though much less brightly rufous and fulvescent in its general coloration.

This is the only instance that I recollect to have personally met with of a female of the Marsh-Harrier assimilating in plumage to the adult male*.

The island of Ceylon may be added to the localities quoted by Mr. Sharpe for this species. I have seen three examples from there, one of which is preserved in the Norwich Museum.

---

* In an interesting paper by Professor Blasius on the European Harriers, published in the 'Naumannia' for 1857 (p. 307), the following observations occur respecting the old females of *Circus æruginosus*:—"The large upper coverts at the edge of the wing and the quill-feathers externally are tinted ash-grey . . . . the tail-feathers reddish grey . . . . In the intensity of the ash-grey colouring of the upper wing, of the markings of the tail, and of the whole colouring, various distinctions present themselves, and also approach to those males whose colours are not very fully developed . . . . The plumage of the old females shows no sharp contrasts; still less have I seen a female of the decided colouring of the old male; yet it has been asserted that the old females become cock-feathered."

In treating of the two Australian Harriers, Mr. Sharpe correctly applies the specific name of *C. assimilis* to the species figured in Mr. Gould's 'Birds of Australia' under the name of *Circus jardinii*, and that of *C. gouldi* to the Harrier figured by Mr. Gould under the name of *Circus assimilis*; but he omits to mention that both these species occur in Tasmania. A specimen of each from that island is contained in the Norwich Museum. The former species (under the name of *Circus jardinii*) is mentioned in 'The Ibis' for 1865 (p. 338), on the authority of Captain Jouan, as also inhabiting New Caledonia; but I am not aware of this circumstance having come under the notice of any other observer. The ordinary Harrier of New Caledonia is *Circus wolfi*, which Mr. Sharpe includes amongst the synonyms of *C. gouldi*, but adds in a footnote that it "may turn out to be distinct." I have myself no doubt as to *C. wolfi* being a good and distinct species, as to which I would refer to my remarks in 'The Ibis' for 1873, pp. 421, 422.

Under the head of *Circus spilonotus* I may observe that Mr. Sharpe appears, by the measurements given, to have described as an adult female a young male in female plumage.

In two females preserved in the Norwich Museum*, the wing measures 17·5 inches, and the tarsus 3·5, being considerably in excess of the dimensions ascribed to the female of this species by Mr. Sharpe. The same collection contains a specimen of this Harrier from the island of Formosa, a locality not quoted by Mr. Sharpe for this species.

The next species to which I propose to refer is *Circus melanoleucus*; and as Mr. Sharpe does not describe this Harrier in its immature stages, I am desirous of offering a few remarks on that subject, in doing which I would acknowledge my obligations to two valuable contributions by Mr. Hume to our information respecting it, one of which is contained in the article on *Circus melanoleucus* in his 'Scrap-book' (pt. 1, p. 307), and the other in his list of the birds of Upper Pegu, 'Stray Feathers' (vol. iii. p. 33), as also to Mr. Swinhoe's remarks on the same subject in his "Notes on Chinese Ornithology" in 'The Ibis' for 1874 (p. 266). The plumage of the immature specimen of this Harrier which Mr. Swinhoe there describes, I take to be that which it wears on first leaving the nest; but it is to be regretted that the accompanying figure, though accurate in other respects, has been coloured with a slight tinge of olive-green, which, so far as I have observed, never exists in nature in this or in any other Harrier. The plate shows, however, the rufous edgings to the feathers of the head, neck, and lesser wing-coverts, which distinguish the first stage of plumage through which this species passes; as the bird becomes older these are replaced by paler margins, which are for the most part quite white*; but one specimen which I have examined appears as though, if it had lived, it would not have passed through this ordinary intermediate stage, as in this instance the adult black plumage is unmistakably appearing at the carpal joint before the disappearance of the rufous margins from the feathers of the head, neck, and lesser wing-coverts. This remarkable example is a young male from Malacca, for the loan of which I am indebted to the kindness of Lord Walden.

---

* The Norwich Museum also contains five males of *C. spilonotus*; in four of these the tarsus measures 3·25 inches, and in the fifth 3·125.

The progress towards maturity is also marked in all cases by the spreading of a conspicuous grey tint over the greater and middle wing-coverts, and over the outer webs of the secondaries and of the upper portion of the primaries—all these grey feathers, however, being crossed at intervals of from an inch to an inch and a half by bars of dark greyish brown about half an inch in width.

After this change in the colouring of the wings has been accomplished, the plumage of the back, which has hitherto been a uniform brown (with the exception, in some individuals, of a few rufous or fulvescent spots on the scapulars), becomes gradually mottled by the feathers assuming a grey tint on their upper portion, a darker colour, verging on black, towards their extremity, and, in the case of the lower scapulars, a narrow white tip. In this stage the bird bears a curious resemblance to the adult male of *Circus spilonotus*, from which, however, it is always to be distinguished by its smaller dimensions. In all the immature stages of *Circus melanoleucus* the tail is greyish brown, crossed with four or five transverse bars of dark brown; but in very young specimens the greyish brown tint is confined to the two central rectrices, the intervals between the transverse bars being in the other tail-feathers white tinged with rufous; as the bird becomes older the tail loses this rufous tint, all the feathers which compose it become grey; and this tinge of grey becomes clearer and more decided as the bird advances towards maturity. The transverse bars, however, appear to be long in disappearing, and I have observed slight traces of them in the case of a specimen which showed no other remains of immature plumage except a very slight tinge or "wash of slaty grey" (to use Mr. Sharpe's expression) diffused over the black portions of the plumage. Mr. Sharpe gives this latter peculiarity as distinctive of the adult female; but the specimen above alluded to, in which I observed it, appears by its dimensions to be a male. The upper tail-coverts, which in the adult males of this species are white broadly barred with angular grey markings, are in immature specimens white with (in most cases) a slight brown shaft-mark. The under tail-coverts in the young bird are also white, with broader brown shaft-marks.

---

* In one example in the Norwich Museum these whitish edgings remain on the feathers at the back of the head, though the central portion of these feathers is black, and the remainder of the bird's plumage is fully adult.

There seems to be no instance on record of a specimen of *Circus melanoleucus* in the fully adult black and grey plumage having been ascertained by dissection to be a female; and the investigations recently made by ornithologists in India on this point tend to prove that if the females of this Harrier ever do acquire a plumage resembling that of the adult male, they only attain it very rarely, and probably when they become aged. Mr. Hume writes to me under date of

8th January, 1875, "all the black-and-white birds dissected by Tytler, Blewett, Oates, Feilden, and myself (aggregating, I suppose, fifty specimens) have been males"*.

The specimen in the British Museum from which Mr. Sharpe took the description of the adult female given in his catalogue is, so far as I know, unique; and the fact of its being a female is inferred from its large proportions. It is the same individual from Assam which was formerly in the possession of Mr. Gould, and which was described by the late Dr. Jerdon in 'The Ibis' (1871, p. 342) as "a very large supposed male of *C. melanoleucus* from Assam;" and it has a peculiarity which Mr. Sharpe does not notice, but which Dr. Jerdon thus describes: "the pale grey colour extends more over the carpal joint than in ordinary specimens, so that the whole shoulder appears white." Mr. Hume, however, states ('Stray Feathers,' vol. ii. p. 34) that he has met with adult males which also presented the appearance of the "whole shoulder being white," and that he considers this to be merely "an individual peculiarity." It may be well to add that this specimen agrees in the character and size of the foot with ordinary specimens of *C. melanoleucus*, the middle toe, without the claw, being barely an inch and a half in length. I may also mention, for the sake of comparison, that in the males of *C. spilonotus* the middle toe is from $1\frac{5}{8}$ to $1\frac{3}{4}$ inch in length, and the foot and tarsus much more robust than in *C. melanoleucus*.

Before leaving the subject of *Circus melanoleucus*, I may add that Ceylon and Malacca should be added to the localities included by Mr. Sharpe in the habitat of that species.

I am now desirous of offering some observations on the Harrier from the Island of Réunion, to which the late M. Jules Verreaux gave the name of *Circus maillardi*, and a presumed male and female of which, obtained in that island, were figured in 'The Ibis' for 1863 (pl. 4), the former being drawn from the type specimen in the Paris Museum†, the latter from a specimen in the Norwich Museum, where there are three examples from the Island of Réunion, but all in brown plumage. The Leyden Museum possesses four specimens from the same island, one of which is in the black-and-white plumage; and from this specimen and a brown one, also at Leyden, Mr. Sharpe's descriptions of this species are taken. The Norwich Museum also possesses two black-and-white Harriers from Joanna Island, in the Comoro group, which were referred to in 'The Ibis' for 1864 (p. 298) and for 1869 (p. 450) as adult males of *Circus maillardi*. There are, however, some slight differences between these two specimens and those in similar plumage from Réunion which it may be desirable to note. First, as regards measurements, Mr. Sharpe gives the length of the wing in the Leyden specimen as 14·1 inches, and the tarsus as 3·35. In one of the Joanna specimens at Norwich the tarsus measures 3·62, in the other 3·56; and in both the wing measures 17·12 along the curve, or 16·8 as measured by Mr. Sharpe, without allowing for the bend of the wing. Secondly, with regard to colouring, Mr. Sharpe describes the upper tail-coverts in the Leyden specimen as "white," and the tail as "silvery ash-colour with remains of a black subterminal band, and a few spots of the same on the outer feathers." M. Verreaux, in his description of the type specimen at Paris (as given in 'The Ibis' for 1863, p. 163), speaks of the colour of the tail in the following terms:—"gris clair argenté en dessus, avec quelques restes de bandes transversales sur la rectrice la plus externe." M. Verreaux does not notice the colour of the tail-coverts; but the omission is supplied by Dr. Oustalet as follows:—"Couvertures inférieures de la queue blanches, couvertures supérieures blanches avec quelques stries brunâtres vers le bout des barbes." Of

---

* Mr. Hume, however, has met with a female in the state of plumage assimilating to *C. spilonotus*. (*Vide* 'Stray Feathers,' vol. ii. p. 34.)

† Besides the type specimen, the Museum at Paris contains four others

---

from Réunion, three of which (including a nestling) are in brown plumage, and the fourth apparently in a state of change from that dress to the black-and-white stage with the grey tail which characterizes the typical example.

I am indebted for my information as to these specimens to the kindness of Dr. E. Oustalet, of the Paris Museum, who has been so good as to send a description of each to Mr. Sharpe for my use.

the Joanna specimens at Norwich, one has the upper tail-coverts white, but crossed with a bar of slate-coloured spots, and the tail silvery grey, but with traces of five transverse bars of a darker grey—all of which, however, are somewhat imperfect, except the lowest. In the other Joanna specimen the upper tail-coverts are also white, but with two transverse bars of slate-colour, the upper one being broken into a row of separate spots, but the lower one continuous; the tail resembles in coloration that of the other examples from the same island, except that the transverse bars are somewhat less indistinct, and are six in number. With these exceptions the general coloration of these two Joanna specimens resembles that of the type of *Circus maillardi* from Réunion, as figured in 'The Ibis' for 1863. Whether these differences between the Réunion and Comoro specimens are specific, or are due merely to age or sex, must be determined by subsequent observations; but in the mean time an additional fact of much interest has occurred since the publication of Mr. Sharpe's catalogue, the British Museum having recently obtained from Madagascar a Harrier which closely resembles in general character and coloration the Joanna Harriers in the Norwich Museum. This specimen has two transverse bars of brownish slate-colour on the upper tail-coverts, which are otherwise white, the lower bar being continuous, and the upper one nearly so; the tail is grey, with seven darker bars, the lowest one being the broadest; the feathers on the head and neck are still edged with brown, which probably denotes the remains of immature plumage; the iris is stated to have been yellow; the wing (straight measure) is 16·9 inches, and the tarsus 3·55 in length.

It therefore seems probable that the Madagascar race to which this Harrier belongs is identical with that found in Joanna Island; and a further question arises as to whether the type of *Circus macroscelis* from Madagascar, which is preserved in the Norwich Museum, is not an immature individual of the same race in its second or intermediate stage of plumage? This seems to be possible, as its dimensions are not very dissimilar, and especially as, on reexamination, it appears that the true measurement of the tarsus (which, in the original description, was given as 4 inches) does not in reality exceed 3·85. On the other hand, it must be remembered that Mr. Edward Newton, by whom this specimen was shot, pronounced it upon dissection to be a male—a conclusion which is perhaps strengthened by the fact, which he also records, that its irides were yellow (*vide* Ibis, 1863, p. 358).

It may be desirable here to observe that Harriers with transverse bars on the tail have been obtained in Joanna Island, in Madagascar, and in Réunion, and it seems probable that these bars are indicative of the second or intermediate stage of plumage. The two Joanna specimens in the Norwich Museum both show these bars, as already mentioned, though they seem as if when the birds were killed they were in process of gradually disappearing. A nestling from Madagascar in the Museum at Paris has no bars on the tail; but the type of *C. macroscelis* has the upper surface of the tail banded with six transverse bars very distinctly marked. The Harrier from Réunion in the Leyden Museum, from which Mr. Sharpe took his description of the "young" plumage, also the three brown Harriers from the same island in the Norwich Museum, and three similar specimens (one a nestling) in the Museum at Paris, are all destitute of these bands; but another Réunion specimen at Paris exhibits them in a marked manner; and as this is evidently an individual in change, and on that account very interesting, I transcribe Dr. Oustalet's description of it. "Plumage brun en dessus, mélangé de brun sur la poitrine, blanc avec des flammes brunes sur le ventre, queue d'un gris brun, roussâtre en dessus, avec six bandes transversales, plus distinctes sur la face supérieure que sur la face inférieure des rectrices. Couvertures infra-caudales blanches à tige brune, couvertures supra-caudales également blanches à tige brune"*.

It is to be hoped that additional specimens and observations will shortly clear up the question of the identity or the reverse of the Harriers inhabiting Joanna Island, Madagascar, and Réunion; and in the meanwhile I think it may be well to record a circumstance which may have some bearing upon it, viz. that, according to information furnished to me by Mr. Felix Bedingfield, who presented to the Norwich Museum two specimens of *Circus maillardi* from Réunion, the Harriers contained in the Réunion Museum were not obtained in that island, but in Madagascar.

---

* It may be worth mentioning, for the sake of comparison, that in the type specimen of *C. macroscelis* the feathers of the upper tail-coverts are brown, with whitish tips.

In the arrangement adopted by Mr. Sharpe the genus *Circus* is followed by *Micrastur*, under which head Mr. Sharpe gives (and, I think, correctly) *M. leucauchen* of Messrs. Sclater and Salvin (P. Z. S. 1869, p. 367) as the adult male of *M. ruficollis*; but the *Falco leucauchen* of Temminck appears to me, by the figure in the Pl. Col. pl. 306 (misprinted pl. 36 in Mr. Sharpe's catalogue), to be an immature female of this species.

I may add that I have never seen a specimen of *M. ruficollis* with the back of the head of a bright unbroken rufous, as represented in Temminck's Pl. Col. (pl. 92) under the title of *Falco xanthothorax*, and I suspect that the colourist may have been inaccurate in this particular.

The collection of Messrs. Salvin and Godman contains a remarkable specimen of this Hawk from Brazil, apparently an adult female, in which the throat, instead of being "whitish washed with rufous," as described by Mr. Sharpe, or pure unbroken rufous, as figured by Temminck, is barred transversely with alternate bands of black and white, narrower than those on the abdomen, but otherwise similar. Across the crop, in this specimen, these bars also exist, but are there so much tinged and blended with the usual rufous colouring of those parts as to present the appearance of a rufous pectoral band. It may be desirable to mention that Mr. Ridgway, the author of the valuable Catalogue of the Falconidæ preserved in the Museum at Boston, U. S. (at p. 40 of that work), treats *Falco leucauchen* of Temminck as specifically distinct from *M. ruficollis*, though, on the other hand, he does not separate from the latter species *M. gilvicollis* of Vieillot and *M. zonothorax* of Cabanis, both of which Mr. Sharpe considers to be distinct species.

This difference of opinion between ornithologists who have closely examined considerable numbers of these birds in the skin, must probably be ultimately solved by those naturalists who may hereafter have the opportunity of observing them in a state of nature, and especially when engaged in the process of nidification or during the period when the sexes are to be found in pairs. With reference to Mr. Sharpe's account of *M. gilvicollis*, it may be well to remark that there appears to be a misprint in the measurements of the adult male, the tarsus being given as 1·2, instead of 2·2.

In connexion with the succeeding genus, *Geranospizias*, Mr. Ridgway, in the work already cited, has (at p. 42) a very curious observation, tending to show the near relationship of this genus to that of *Polyboroides*, which it would seem in great measure to represent on the American continent. Mr. Ridgway remarks that he has found in "an alcoholic specimen of *G. cærulescens*" the tibio-tarsal joint "flexible both backwards and forwards" . . . . and this singular flexibility of that joint . . . . "just as well developed in *Geranospiza*" as in *Polyboroides*. It may here be well to remark that the more southern species of this genus, to which Mr. Sharpe assigns the specific name of "*cærulescens*," bears in Mr. Ridgway's work that of "*gracilis*," while the "*G. niger*" of Mr. Sharpe is divided by Mr. Ridgway into two races (called by him "varieties"), one of which he states to occur in tropical America, south of Panama; and to this he applies the name of "*cærulescens*," its prevailing colour being "bluish plumbeous;" whilst to the other, which is found north of Panama, and is of a "plumbeous-black" colour, he restricts the specific name of "*niger*." In regard to the coloration of these two races Mr. Ridgway adds the following remark:—"Specimens from Panama are exactly intermediate between *cærulescens* from Brazil and *niger* from Mexico."

Mr. Sharpe speaks of the "young stage" of *G. niger* as being especially distinguished from the adult by a conspicuous white bar on the lower surface of the primaries; but another noteworthy distinction is the white colour of the forehead and chin in the immature birds, which is exchanged for slaty black in the adults.

I may also observe that Mr. Sharpe gives the colour of the iris in the adult male of his *G. cærulescens* as "red;" but Mr. W. B. Lee, in 'The Ibis" (1873, p. 135), mentions a specimen which he shot in the territory of the Argentine Republic, but of which he does not record the sex, as having the irides "bright yellow;" and the adult female is also described by Prince Maximilian of Wied as having a "very pale yellow" iris, which is confirmed by D'Orbigny, who speaks of this species as having "pale yellow eyes"*.

The genus *Geranospizias* is followed in Mr. Sharpe's catalogue by that very curious West-African Hawk, *Astur macrurus,* of Hartlaub, which Mr. Sharpe, I think very properly, erects into a distinct genus under the name of *Urotriorchis,* between which and the allied African genus *Melierax* Mr. Sharpe has intercalated an American form, *Falco unicinctus,* of Temminck, for which he accepts (see Addenda, at p. 456) Mr. Ridgway's generic name of *Antenor.* I venture to dissent from the position which Mr. Sharpe assigns to this genus, and am disposed to prefer the view suggested by Mr. Ridgway in his Catalogue of the Falconidæ in the Boston Museum (p. 23, note), that it is "intermediate between *Buteo* and *Urubitinga*;" and, indeed, upon Mr. Sharpe's own definition, it would appear to belong to his "subfamily Buteoninæ," as (according to the measurements of a male skeleton from Mexico in the Norwich Museum) the tibia is 4$\frac{3}{8}$ inches in length, and the tarsus only 3 inches, the length of the hind claw in the male being 1$\frac{1}{8}$ inch, which is less than the difference between the tarsus and the tibia.

In Messrs. Baird, Brewer, and Ridgway's recent work the 'Birds of North America' (vol. iii. p. 249), those gentlemen distinguish the North-American form of *Antenor* from the Southern under the designation of "variety *harrisi,*" with the following observation:—"It seems that South-American birds of this species never attain the simple tricoloured plumage assumed by the adult of the North-American form." So far as I have had the opportunity of examining specimens from South America, this observation is correct*.

---

* [The iris of a specimen of *Geranospiza nigra,* shot by me at Dueñas, in 1859, was "burnt sienna, the outer portion being lighter-coloured; legs blood-orange; cere black." (See Ibis, 1860, p. 44, sub *Geranospiza cærulescens.*)—O. S.]

Passing on to the genus *Melierax,* I have a few observations to make relative to the colour of the irides in some species of that genus.

In *M. canorus* Mr. Sharpe describes the colour of the iris as "dark reddish brown" in the adult, and "dark brown" in the immature bird. The former is in accordance with all the observations that I have met with; but as regards the the colour of the eye in younger specimens, I may remark that Mr. Ayres, in 'The Ibis' for 1869 (p. 289), records the iris of a young male which he obtained as being "yellow."

In treating of the nearly allied species *M. polyzonus,* Mr. Sharpe gives the iris of the adult male as "pale umber-brown;" but Rüppell, in the 'Neue Wirbelthiere' (p. 37), states that the iris in adult birds is a "beautiful carmine-red;" and Barboza du Bocage, in his tenth list of the birds of Portuguese West Africa, also states that it is "red."

In the case of *M. gabar,* the iris of the immature bird is stated by Mr. Sharpe to be yellow, which agrees with all the notices which I have seen respecting it; but as regards the colour of the iris in the adult of this species, there appears to be a considerable variation between the records of different observers, and probably therefore in the birds themselves. Mr. Sharpe quotes Andersson, who gives it as "brilliant purple"†, and Von Heuglin, according to whom it is "scarlet;" Le Vaillant speaks of it as "bright yellow;" Mr. Atmore, as quoted by Layard, describes it as "bright crimson;" Mr. Ayres, in 'The Ibis' for 1869 (p. 289), mentions an adult female in which it was "dark reddish yellow," Mr. Buckley, in 'The Ibis' for 1874 (p. 359), an adult male in which it was "dark hazel;" and Prof. Barboza du Bocage, in the list already quoted, mentions a male in which the iris was "red."

---

* In the P. Z. S. for 1858, p. 150, Dr. Sclater has recorded a curious variation in the form of the upper mandible in this species, as exhibited in two specimens from Chile, which are preserved in the Norwich Museum.

† I think it probable that by the term "purple" Andersson intended to denote a dark red.

I may here remark (as I do not observe that the fact is alluded to by Mr. Sharpe) that "*Falco gabar*, Shaw," was specified by the late Mr. G. R. Gray as the type of his genus *Micronisus*, in the first edition of his 'List of Genera of Birds,' published in 1840; but it seems to me that Mr. Sharpe is unquestionably right in following Dr. Hartlaub in his assignment of this species to the genus *Melierax*.

[To be continued.]

XV.—*Notes on Severtzoff's 'Fauna of Turkestan'* (*Turkestanskie Jevotnie*). By H. E. Dresser.

[Continued from page 112.]

46. Corvus corax, L.; Severtzoff, p. 63.

Horizontal range. Resident in districts I., II., III., and IV.

Vertical range. Resident in districts 2 and 3, and met with during summer in districts 4 and 5.

47. Corvus subcorax, Severtzoff, pp. 63, 115.

Horizontal range. Resident, though rare, in districts II. and III.

Vertical range. Resident, but rare, in districts 1 and 2.

This species Severtzoff refers, with a note of interrogation, to *Corvus umbrinus*, Rüpp.; but as he says nothing about the characteristic brown coloration of the head and neck, I scarcely think it can be that species, but consider it far more likely to be *Corvus culminatus*. He describes it (p. 115) as resembling *Corvus corax*, and having the same rounded tail, but smaller in size, being, however, larger than *Corvus corone*, which it also resembles, but has a note like that of the Raven, though not so harsh; and the lanceolate feathers on the throat commence from the base of the bill, as in the Raven. In size it measures 23·2 inches in length, and 42 in extent, culmen 2·5–2·7, tail 9·5. Some specimens of *Corvus corone*, he adds, resemble *C. subcorax* in having a large bill and rounded tail; but in the former species the bill is always more slender and not so high as that of *C. subcorax*.

48. CORVUS CORONE, L.; Severtzoff, p. 63.

Horizontal range. Breeds in districts I., II., and III., and is resident in district IV. In general not numerous.

Vertical range. Breeds in districts 1, 2, and 3, and is met with in summer in districts 4 and 5.

49. CORVUS CORNIX, L.; Severtzoff, p. 63.

Horizontal range. Is found in winter in districts I., II., and III.

Vertical range. Is found in winter in districts 1, 2, and 3, and during passage in districts 4 and 5.

Severtzoff includes under this species *β. hybrida,* doubtless a cross between *C. corone* and *C. cornix,* and speaks of it as having nearly the same range as *Corvus cornix.*

50. CORVUS MONEDULA, Linn.; Severtzoff, p. 63.

Horizontal range. Resident in districts I., II., III., and IV.

Vertical range. Resident and common in districts 1 and 2, breeds in district 3, and is met with during summer in districts 4 and 5.

51. CORVUS FRUGILEGUS, Linn.; Severtzoff, p. 63.

Horizontal range. Breeds in districts I., II., and III., and is resident in district IV., but is nowhere very common.

Vertical range. Is met with breeding, and is rare during the winter in districts 1 and 2.

52. PYRRHOCORAX GRACULUS (L.).

Fregilus graculus, Severtzoff, p. 63.

Horizontal range. Resident in districts I., II., III., and IV.

Vertical range. Is occasionally met with in winter in district 2, is resident in districts 3 and 4, and is found during summer and possibly breeds in district 5.

53. PYRRHOCORAX ALPINUS, Vieill.; Severtzoff, p. 64.

Horizontal range. Resident in district IV.

Vertical range. Resident in district 4, and is found during summer in district 5, where it is also in all probability resident.

54. Pica rustica, Scop.

Pica caudata, var. *α. bactriana*, Gld., *β. leucoptera*, Gld.; Severtzoff, p. 64.

Severtzoff divides the Magpie into the two subspecies as above; but in my recently published article on *Pica rustica*, in the 'Birds of Europe,' I have shown that these various subspecies cannot stand. He states that the range of the two so-called subspecies is the same, viz.:—

Horizontal range. Resident in districts I., II., III., and IV.

Vertical range. Resident in districts 1 and 2; breeds, and may be resident, in district 3; and occurs during summer in districts 4 and 5.

55. Nucifraga caryocatactes (Linn.); Severtzoff, p. 64.

Horizontal range. Resident in district I.

Vertical range. Resident in district 4, and possibly occurs during winter in district 3.

56. Podoces panderi, Fisch.; Severtzoff, p. 64.

Horizontal range. Resident in district III.

Vertical range. Resident in district 1.

57. Pastor roseus (Linn.).

Sturnus roseus, Severtzoff, p. 64.

Horizontal range. Breeds in districts I., II., III., and IV., occasionally in considerable numbers.

Vertical range. Is found in summer in districts 1 and 2, and breeds in the latter as well as in district 3.

58. Sturnus vulgaris, L.; Severtzoff, p. 64.

Horizontal range. Breeds in districts I., II., and III., and is met with in winter, though rare, in districts III. and IV.

Vertical range. Breeds in districts 1, 2, and 3, is found during the winter in districts 1 and 2, and is met with in the summer or during passage in districts 4 and 5.

Severtzoff further includes as a distinct species what is doubtless the Indian form of our European Starling (*Sturnus nitens*, Hume, nec Brehm), under the name of

59. Sturnus unicolor (*purpurascens*? Gould), the range of which he gives as nearly the same as that of the typical form, viz.:—

Horizontal range. Breeds in districts I., II., III., and IV., and is possibly resident in district IV.

Vertical range. Breeds in districts 1, 2, and 3, is found during winter in district 1, and in the summer or during passage in districts 4 and 5.

60. Passer domesticus (L.); Severtzoff, p. 64.

Horizontal range. Resident in districts I., II., III., and IV.

Vertical range. A rare straggler to district 1 during summer, but is resident in district 2.

61. Passer salicarius, Severtzoff, p. 64.

? *Passer salicicola,* Vieill.

Horizontal range. Breeds in districts II., III., and IV., but is rare during winter.

Vertical range. Breeds in districts 1 and 2, but is rare in the former.

62. Passer montanus (L.); Severtzoff, p. 64.

Horizontal range. Resident in districts I., II., III., and IV.

Vertical range. Resident in districts 1 and 2, breeds, and possibly is resident, in district 3, and occurs during summer in districts 4 and 5.

63. Passer ammodendri, sp. nov.; Severtzoff, pp. 64, 115.

Horizontal range. Resident in district III.

Vertical range. Resident in district 1.

Respecting this species, which Severtzoff describes as new, he writes (p. 115) as follows:—"In this species the culmen is shorter and stouter than in the other Sparrows; the nostrils are placed at the base of the bill, and are covered with hair-like feathers; the legs are short, the tarsus covered with seven scutellæ; the tail is nearly even, only the two central and the two lateral feathers being about 1''' shorter than the rest; the second primary is the longest; legs blackish brown; iris brown.

"*Male.* Crown and nape black, the feathers edged with greyish brown; throat and superciliary stripe pure black; but besides these there is a line of brown over each eye; cheeks, sides of the neck, and flanks greyish brown; upper parts greyish brown, with black markings; underparts white: primaries blackish brown, with white edges to the feathers; secondaries and wing-coverts brownish grey, with narrow white margins and broad black spots; tail-feathers blackish, with light greyish margins.

"*Female.* Lighter-coloured than the male; the throat-mark is grey, and the feathers have broad white edges; head and neck brownish grey, without any black; lines over the eye very light brown, almost white.

"This specimen was obtained at the fortress of Peroffsk in winter; and specimens were also collected at Djulek both in the winter and summer. It was also observed during the winter near the Syr-Darja, where it is resident."

This species has lately been described by Mr. Hume in 'Stray Feathers' (1874, p. 516) under the name of *Passer stoliczkæ*.

64. Passer petronia, L.; Severtzoff, p. 64.

Horizontal range. Breeds in districts II., III., and IV., and is possibly resident in district IV.

Vertical range. Breeds in district 3.

65. Passer pulverulentus, sp. nov., Severtzoff, pp. 64, 116.

Horizontal range. Breeds in districts I., II., III., and IV., and is possibly resident in district IV.

Vertical range. Breeds in districts 3 and 4.

Severtzoff describes this species as follows:—"The bill is conical and stout; the nostrils small, elliptic, and devoid of a covering of feathers; wings long, extending down over three fourths of the length of the tail; the first two primaries equal in length, being the longest; tarsus slight and slender, covered with five scutellæ, two of which are short and thin. Both sexes are similarly coloured, being almost uniform dusty greyish brown; hence its name. The crown, fore part of the back, and shoulders are dirty brown, marked with blackish lines, the lower back darker; rump black, the feathers having distinct white edges; nape, superciliary lines, cheeks, throat, sides of the neck, and breast greyish brown, the nape and supercilium being lightest, the other parts marked with scarcely visible lines; centre of the abdomen white; under tail-coverts dark grey, with white edges; wings brown, the quills having lighter edges; secondaries with the basal portion blackish brown, the centres lighter, and the terminal portion dark brown, thus forming two broad bars across the wing; tail blackish brown, the feathers having light grey edges; culmen dirty yellowish at the base, blackish towards the tip. Total length 6·5 inches, extent 10, wing 3·65, tail 2·45, culmen 0·45, tarsus 0·7, middle toe ·55.

"It inhabits the Carabuzinsk Mountains to the south of the Aulje-ata, where it was found in June, and also in August in the Djamandavansk Mountains, between Narin and Arpa. It frequents the rocks, and is rare, being, moreover, most difficult to distinguish as it skulks about amongst the rocks. It most nearly resembles *Passer petronia*."

66. COCCOTHRAUSTES CARNEIPES, Hodgson.

Coccothraustes speculigerus, Severtzoff, p. 64.

Horizontal range. Resident in districts I., II., III., and IV.

Vertical range. Is met with in winter in district 3, and breeds and is resident in district 4.

67. CHLOROSPIZA CHLORIS (L.); Severtzoff, p. 64.

Horizontal range. Breeds and occurs in winter in district III.

Vertical range. Is found in winter in district 2, and breeds in district 3.

68. FRINGILLA MONTIFRINGILLA, L.; Severtzoff, pp. 64, 116.

Horizontal range. Is found during passage in districts I., II., and III., and during winter in districts III. and IV.

Vertical range. Is found during passage in districts 2, 3, 4, and 5, and during winter in district 2.

Severtzoff writes (p. 116) as follows:—"In Turkestan there are two forms or varieties of the Brambling, viz.:—*a*, which has a light spot on the hind neck, this spot being white in the male and grey in the female; *b*, in which the hind neck is dark-coloured. Otherwise both forms precisely resemble the European bird."

69. **Fringilla cœlebs**, L.; Severtzoff, p. 64.

Horizontal range. Is found in winter in district III.

Vertical range. Is found, but is rare, during winter in districts 1 and 2.

70. **Montifringilla fringilloides** (Boie) (*nivalis*, auctt.).

Fringilla nivalis, Severtzoff, p. 64.

Horizontal range. Is found during the breeding-season and in winter in districts II., III., and IV.

Vertical range. Is met with during winter in districts 2 and 3, in district 4 during passage, and breeds in district 5.

71. **Leucosticte brandti**, Bp.; Severtzoff, p. 64.

Horizontal range. Resident in districts I., II., and IV.

Vertical range. Is possibly to be met with in districts 3 and 4 during winter, breeds, and is possibly resident in district 5.

72. **Linaria cannabina** (L.).

Acanthis cannabina, Severtzoff, p. 64.

Horizontal range. Breeds and is also met with during the winter in districts I., II., and III., occurring in district IV. in winter only.

Vertical range. Is met with in winter in district 2, and breeds in districts 3 and 4.

Besides this species Severtzoff includes *Acanthis cannabina β. bella*, Bp., which has the same range as the typical form, except that it breeds in district IV.

73. **Linaria flavirostris** (L.).

Acanthis flavirostris, Severtzoff, p. 64.

Horizontal range. Occurs during winter in districts II. and III.

Vertical range. Occurs during winter in districts 1 and 2.

74. **Linaria borealis**, Vieill.

Acanthis linaria, Severtzoff, p. 64.

Horizontal range. Rare during winter in districts I., II., and III.

Vertical range. Occurs during winter in districts 1, 2, and 3.

75. CARDUELIS ORIENTALIS (Eversm.); Severtzoff, pp. 64, 116.

Horizontal range. Breeds and is found during winter in districts I., II., III., and IV.

Vertical range. Occurs during winter in district 2, and breeds in districts 3 and 4.

Respecting this species Severtzoff writes (p. 116) as follows:—"This bird is not merely a climatic variety of the European Goldfinch, from which it differs in lacking the black markings on the head, the yellowish brown on the back and on the breast being replaced by grey. Both species inhabit the same localities in the Thian-shan mountains; and the distinctive characters were constant in all of the hundreds of specimens I examined. The differences between *Passer salicarius.* and *Passer domesticus* are also constant, although these two Sparrows frequently inhabit the same localities, and are found in the same flock; and they hold good not only in the autumn dress, but also in the full breeding-plumage."

76. CARDUELIS ELEGANS, Steph.

Carduelis europæus, Severtzoff, p. 64.

Horizontal range. Is found during winter, and possibly during the breeding-season, in districts I., II., and III.

Vertical range. Occurs during winter in districts 2 and 3, and possibly breeds in districts 3 and 4.

77. SERINUS PUSILLUS (Pall.).

Orægithus pusillus, Pall. (*O. ignifrons,* Eversm.); Severtzoff, pp. 64, 116.

Horizontal range. Resident in districts I., II., III., and IV.

Vertical range. Resident in district 3; breeds in district 4.

Severtzoff writes (p. 116) as follows:—"Eversmann's *Pyrrhula* (*Serinus*) *ignifrons* (afterwards united with *P. pusillus,* Pallas, in the Nat. Hist. of the Orenb. District, iii. p. 309) was described from a Semirechik specimen; and the Turkestan bird certainly differs from Pallas's description of the Caucasian form . . . . . Having carefully examined many specimens, I find that, though the young differ from the adult, yet they do not agree with Pallas's description."

I will not transcribe the detailed description given by Severtzoff, as it is sufficient to point out that the differences noticed by him are, that instead of greyish margins and tips to the feathers on the back, shoulders, wings, tail, and underparts, the Turkestan bird has these tips and margins reddish yellow both in the immature and adult plumage; but in the former dress the yellow colour is duller and tinged with brown, especially on the back. In the winter the extreme terminal portion of these margins is white, which is worn off in the spring and is never at any season sufficiently developed to cover and hide the yellow. He describes both the adult male and female as having a red frontal patch, and the young as lacking this and having the head dark brown, and not black, and the throat lighter. He suggests that Pallas's birds may have been preserved in spirits. To this I may add that I possess specimens from Asia Minor and the Caucasus, as well as from Yarkand, and find that they agree closely *inter se*, all having the margins of the feathers yellowish, and not white.

78. PYRRHULA EUROPÆA, Vieill.
Pyrrhula vulgaris, Severtzoff, p. 64.
Horizontal range. Rare during winter in district I.
Vertical range. Found during winter in district 3.

79. PYRRHULA NEPALENSIS (an sp.?), Severtzoff, pp. 64, 117.
Range the same as that of *P. vulgaris*.

Respecting this bird Severtzoff writes (p. 117) as follows:—"My young male obtained in the winter of 1865, near the mountains of Vernoe, was in error referred to *Pyrrhula nepalensis*, Gould (B. of Asia). An adult female, closely resembling European specimens, was killed at the same place. The young male is a trifle smaller than this female, has the abdomen ashy grey, and no shade of red on the back; and hence it was referred to *P. nepalensis*. It has, however, the head, wings, and tail black, with a metallic lustre, and there is a white bar across the wing, whereas *P. nepalensis* has the head and back similar in colour."

I have not had an opportunity of examining a specimen of this Bullfinch from Turkestan; but it appears to me highly probable that it is identical with *Pyrrhula cineracea*, a new species lately described by Cabanis from examples sent from Dauria by Dr. Dybowski.

80. URAGUS SIBIRICUS (Pall.); Severtzoff, p. 64.

Horizontal range. Occurs irregularly, being found during the winter, and is said also to breed, in district I.

Vertical range. Is found during winter in district 3, and breeds in district 4.

81. CARPODACUS RUBICILLUS (Güld.); Severtzoff, p. 64.

Horizontal range. Resident in district I.

Vertical range. Possibly it occurs during winter in district 3, but is resident in district 4.

82. CARPODACUS RHODOCHLAMYS (Brandt); Severtzoff, p. 64.

Horizontal range. Breeds, and also occurs during winter, in districts I. and II., is rare during winter in district III., and is resident in district IV.

Vertical range. Is found during winter in districts 2 and 3, being, however, rare in the former, and breeds in district 4, where it is probably resident.

83. CARPODACUS ERYTHRURUS, Severtzoff, p. 64.

Horizontal range. Breeds in districts I., II., III., and IV.

Vertical range. Breeds in districts 1, 2, and 3.

84. ERYTHROSPIZA INCARNATA, sp. nov. Severtzoff, pp. 64, 117.

Horizontal range. Resident in districts I. and II., and is found during winter, as also during passage (the latter, however, but rarely), in districts III. and IV.

The vertical range of this species is not given.

Severtzoff says that this species, which he names *incarnata* on account of the rose-colour which pervades the plumage becoming quite bright in summer, is more nearly allied to *Erythrospiza githaginea* than any other of the group. He describes it (p. 117) as follows :—" Bill stout, but not large; legs short, covered with six scutellæ, two of which are short and broad, middle toe with claw equal in length to the tarsus; the wings reach down to three fourths of the length of the tail; first and second primaries equal in length, being the longest; in general form the bird is short and stout.

"♂ *ad. in autumn dress.* Crown, back, and shoulders greyish sandy brown, with lighter edges and dark central lines; hind neck and cheeks similar, but without dark lines; superciliary region, throat, breast, and flanks carmine, with grey edges to the feathers; abdomen and under tail-coverts white, with a carmine tinge; quills blackish brown, with light edges, which latter are grey on the lesser wing-coverts, and on the larger coverts are very broad, white, tinged with carmine towards the tips; on the median coverts the margins are white, but the carmine is less developed; hence on the wing are two white patches divided by carmine; the primaries have whitish margins, which in a few are washed with carmine.

"The tail-feathers are blackish brown, with grey edges. The upper mandible is yellowish brown, the lower mandible light yellow; legs are light brown; iris dark brown.

"In spring all the rose-coloured feathers have become bright blood-red, and the whitish has changed to a snowy white colour, except the stomach and the under tail-feathers, which are protected from the sun. The rose-colour is brightest on the wings, paler on the throat, breast, superciliary region, flanks, and rump, where only the edges of the feathers are of that colour. The dark lines on the crown- and back-feathers change in spring into a darker colour; and the edges of the grey feathers are lost by that time.

"The female is in spring and autumn of the same colour as the male, and differs from it only by not having the rose colour on the flanks, the breast, and the median-coverts; also the white spots on the wings are smaller.

"The young male in the first autumnal plumage is like an old female; but it has no white edges on the large wing-coverts, which are of a brownish-red colour; on the median coverts are only very narrow white edges, which do not form a white spot when the wing is closed.

"The young female bird in first autumnal plumage has scarcely any red colour at all, it being replaced by light grey, which is faintly shaded with red on the breast.

"*Measurements.* ♂, length 6″ 3–6‴, extent 10″ 5‴–11″; ♀, length 6″ 2–4‴, extent 10″ 4–5‴, wing 3″ 5‴, tail 2″ 1‴, culmen 3½‴, middle toe 5⅓‴, tarsus 6½‴.

"This bird is a resident in Turkestan, and is found after the breeding-season in flocks of from 50 to 100 individuals. It was killed at the end of September on the Issik-kul, in August and October on the Upper Narin, at an elevation of from 9000 to 10,000 feet; in October and in the winter, however, it is not found higher than 2000 feet; in the steppes, everywhere, in summer as well as in autumn and winter, we found this bird only near stony or clayey places. In autumn and spring it moves about very much, feeding on small seeds, and avoids the woods, and even the bushes. It runs very fast, although it has such short legs; and it flies swiftly and well."

85. Erythrospiza sanguinea (Gould).

Erythrospiza phœnicoptera, Severtzoff, p. 64.

Horizontal range. Resident in districts I., II., III., and IV.

Vertical range. Rare in winter in district 2, resident in district 3.

86. Erythrospiza obsoleta (Cab.); Severtzoff, p. 64.

Horizontal range. Breeds in districts III. and IV.

Vertical range. Breeds in districts 1 and 2.

87. Emberiza cioides, Brandt (an sp.?); Severtzoff, p. 64.

Horizontal range. Common during passage in districts I. and II., rare during winter in district III.

Vertical range. Rare during winter in district 2, common during passage in district 3, occurs during passage in districts 4 and 5, and possibly breeds in the former.

Of this species, which he marks with a query as possibly new, Severtzoff gives no description, and I am therefore unable to state what it is.

88. Emberiza cia, L.; Severtzoff, p. 64.

Horizontal range. Common during passage, and also breeds, in districts I. and II.; breeds and occurs during winter in districts III. and IV.

Vertical range. Occurs in winter and during passage in district 2, is common in district 3 during passage, and breeds there as well as in district 4, and occurs during passage only in district 5.

89. EMBERIZA HORTULANA, L.; Severtzoff, p. 64.

Horizontal range. Breeds in districts I., II., and III.

Vertical range. Rare during passage in district 1, and breeds in districts 2 and 3.

90. EMBERIZA CÆSIA, Cretzschm.; Severtzoff, p. 64.

Horizontal range. Breeds in districts I., II., III., and IV.

Vertical range. Breeds in districts 2 and 3, being rare in the former, and occurs during passage in districts 4 and 5.

Writing on this species, Severtzoff says (p. 117) that there are two forms of this Bunting in Turkestan—one (which he calls *E. cæsia*) which has a whitish throat, and another (which he calls *E. rufibarba*) with a light brown throat; and he adds that he has seen several intermediate forms between these, and that there are therefore not two species. Both forms occur in the same locality; and therefore the differences are not climatic.

91. EMBERIZA CITRINELLA, L.; Severtzoff, p. 64.

Rare during winter near the Syr-Darja river.

92. EMBERIZA STEWARTI, Bl.

Emberiza caniceps, Severtzoff, p. 64.

Horizontal range. Breeds in districts III. and IV.

Vertical range. Breeds in districts 3 and 4.

93. EMBERIZA LEUCOCEPHALA, Gm.

Emberiza pithyornis (an sp.?), Severtzoff, p. 64.

Horizontal range. Common during passage in districts I. and II., and occurs during winter in districts III. and IV.

Vertical range. Occurs during winter in district 2, and during passage in districts 3, 4, and 5, being common in district 3; in district 4 it may possibly breed.

94. EMBERIZA SCHŒNICLUS, L.; Severtzoff, p. 64.

Horizontal range. Occurs in winter and during passage in districts I., II., and III., and during winter in district IV.

Vertical range. Is found during winter in districts 1 and 2, and during passage in districts 2 and 3.

Emberiza pallasi, Cab.

Emberiza schœniclus β. minor, Severtzoff, pp. 64, 118.

Mr. Severtzoff remarks (p. 118) that he fully agrees with Herr von Homeyer in considering *Emberiza polaris*, Midd., a good species. He met with numbers of Reed-Buntings in Turkestan during passage, many of which belonged to the small form (*E. pallasi*); but he also obtained intermediate specimens. *E. polaris*, however, he never met with. Both forms of *Emberiza schœniclus* (*E. schœniclus* and *E. pallasi*) were found consorting together in spring, from the end of January to the early part of March, near Chickment, and in the autumn, from the early part of October on the Issik-kul, and from the beginning of September near Aulje-ata. The measurements of *E. pallasi* he gives as "total length 6·2 to 6·4 inches, extent 9·0 to 9·6," and adds that it may be distinguished by the wing-coverts being light reddish brown, whereas in *E. polaris* they are greyish.

95. Emberiza pyrrhuloides, Pall.; Severtzoff, p. 64.

Horizontal range. Sedentary in districts I., II., and III.; but it is questionable if it is sedentary on the Issik-kul.

Vertical range. Sedentary in district 1, and breeds in district 3.

96. Emberiza miliaria, L.

Emberiza miliaris, Severtzoff, p. 64.

Horizontal range. Breeds in districts II. and III., and occurs in district IV. during winter.

Vertical range. Sedentary in district 2, and breeds in district 3.

97. Emberiza pusilla, Pall.; Severtzoff, p. 64.

Horizontal range. Rare during passage in district I.

Vertical range. Rare during passage in district 2.

98. Emberiza luteola, Lath.

Euspiza brunniceps, Severtzoff, p. 64.

Horizontal range. Breeds in districts I., II., III., and IV.

Vertical range. Breeds in districts 1, 2, and 3, and is common in district 2.

99. Emberiza aureola, Pall.

Euspiza aureola, Severtzoff, p. 64.

It was observed during summer on the Syr-Darja river.

100. Plectrophanes nivalis (L.); Severtzoff, p. 64.

Horizontal range. Rare during winter in district III.

Vertical range. Rare during winter in district 2.

[To be continued.]

XVI.—*Descriptions of some supposed new Species of Birds.*

By Major Godwin-Austen, F.Z.S., and Arthur, Viscount Walden, F.R.S.

Suthora munipurensis, n. sp.

Desc. Crown of head cinnamon-brown, becoming more olivaceous or fulvous green on back; shoulder of wing greenish umber. Primaries black, the first four edged white, the rest crossed with a bright fulvous bar on the outer webs; the secondaries edged broadly with fulvous, and a few of the last tipped white on inner web. Tail ruddy fulvous at base, paling towards the end, which is dusky and indistinctly barred, a broad supercilium black, lores and narrow circle round the eye pure white. Ear-coverts and side of neck grey; chin and throat black, merging into pearly grey and white on the breast; under tail-coverts pure white.

Length 4·5 inches, wing 1·8, tail 2·4, tarsus ·77, bill at front ·28.

Obtained by Mr. William Robert, near Karakhul, Munipur hills.

Sphenocichla, n. g.*

Bill longer than the head, conical, straight, and acute. Culmen, from region of the nostrils to the forehead, much compressed; from nostril to apex swollen and flattened. Nostrils protected by a scale-like cover and shaded by dense nareal tufts. Commissure almost straight. Lower mandible flatsided; gonys broad, more flat than rounded, but slightly curved. Tarsus strong, moderately long; hallux and claw well developed; outer toes equal and but slightly shorter than the middle. Wing short, rounded; first primary half as long as second; second, third, and fourth about equal; fifth longest. Outer pair of rectrices short; next pair shorter than remainder.

---

* This may be the same genus as that named *Heterorhynchus* by Mandelli; but if so, that title cannot stand, having been previously employed by Lafresnaye.

SPHENOCICHLA ROBERTI.

General coloration throughout dark umber-brown, richer on the wings and tail, which are closely barred with black; feathers of the nape and back edged with darker brown, and with an inconspicuous pale spot near tip; these spots are more defined on the side of the neck. The feathers of the throat, neck, and breast are lanceolate, with a white edging showing as V-shaped markings; towards the abdomen these become less conspicuous, and only a few white spots dot the flanks. Bill grey, pale beneath and at tip.

Length about 6·5 inches; wing 2·8; tail 3·0, tarsus ·93, bill at front ·87, depth at base ·4.

Shot on Hemes Peak, North Cachar hills, and also in the Munipur hills.

This anomalous form has the structure of a *Turdinus* and the bill of a *Stachyris*.

ACRIDOTHERES ALBOCINCTUS.

Top of head glossy black, feathers rather elongated, and a white collar on back of neck; back dull grey-black, with a slight green tinge, and with a tendency to purple on the shoulders and wing-coverts. Tail black with green reflections. Primaries black, white at base, forming a wing-band; secondaries warm sepia-brown. Beneath dull but dark greenish grey. Upper tail-coverts black, tipped white, and arranged in bars. All the tail-feathers tipped with white, except the two centre ones. Bill and legs yellow.

Length about 9 inches, wing 5, tail 3·5, tarsus 1·4, bill at front ·91.

Appears numerous in Munipur valley, where the type was obtained.

PNOEPYGA ROBERTI, n. sp.

Above olive-brown, each feather pale-centred and fringed or tipped with dark brown. Lores albescent. Between the eyes and the rictus black. A well-defined streak extending from above the eye down each side of the head, fulvous. Ear-coverts cinereous at base, brown towards the tips. Chin and throat pure white, each throat-feather being terminated by a small black triangular drop; as the tips of the feathers overlap, these drops form continuous black lines, the two principal ones descending from the angles of the under mandible. Cheeks ferruginous, each feather with a black terminal drop. Pectoral and abdominal feathers pale brown, with broad pure white or fulvous-white centres. Under tail-coverts bright ferruginous yellow. Plumage on the rump loose, soft, and dense, completely concealing the short tail, and being of an almost uniform ferruginous brown colour. Wings, when closed, dark chocolate-brown, most intense on the secondaries. Most of the wing-coverts distinctly tipped with almost pure white, so also the inner tertiary quills. Rectrices chocolate-brown. Mandibles dark brown. Legs pale horn-brown.

Bill from nostril ·37 inch, wing 2·15, tarsus ·75, tail 1·15.

Described from specimens obtained at Chakha, in the Munipur hills, and also at Asalu.

In general appearance this bird closely resembles *Turdinus brevicaudatus*. The upper plumage of the two is almost identical. By its much smaller dimensions and diminutive tail, however, it can be readily distinguished. It is the *Pnoepyga caudata*, Blyth, apud Godwin-Austen (J. A. S. B. 1870, p. 101. no. 331).

PNOEPYGA CHOCOLATINA, n. sp.

Above olive-brown, each feather fringed with a somewhat fainter tint, thus imparting a subdued scaly aspect to the back. Wings and tail chocolate-brown. Upper and under tail-coverts ferruginous brown, brightest on the under coverts. Lower surface generally ferruginous brown, many of the abdominal feathers being largely centred with white or fulvous white. Pectoral feathers with minute terminal white drops, or some with narrow white or fulvous white centres. A few almost pure white feathers on the middle of the breast. Chin white; gular feathers white, with pale fulvous or ferruginous edges. Bill dark brown. Legs pale flesh-colour.

Bill from nostrils ·25 inch, wing 1·87, tarsus ·75, tail 1·75.

Described from a specimen obtained at Kedimai, in the Munipur hills.

This species and *P. longicaudatus* constitute a section of the genus *Pnoepyga*, in which the tail is fully developed.

XVII.—*Contributions to a History of the* Accipitres. *Notes on Birds of Prey in the Museum at the Jardin des Plantes and in the Collection of Mons. A. Bouvier.* By R. Bowdler Sharpe, F.L.S., F.Z.S., &c., of the Zoological Department, British Museum.

I have lately returned from a trip to Paris, which I made for the purpose of studying typical and obscure specimens of *Strigidæ, à propos* of the second volume of my 'Catalogue of Birds,' shortly to appear. Everywhere I was received with the utmost hospitality; and my thanks are due to Professor Milne-Edwards, M. Alphonse Milne-Edwards, and Dr. Oustalet, for the courtesy with which they gave me every facility for prosecuting my studies. At the house of my friend M. Bouvier I found a most wonderful collection of birds; and it will not be long before the "Maison Bouvier" becomes as well known to the scientific world as the "Maison Verreaux" used to be. By his kindness I have been allowed to bring to England many specimens of Accipitres, which I hope to write upon a little later; at present I must content myself with describing a remarkable new *Scotopelia* which I found in his collection. In addition I have the following notes to offer referring to some points which I consider likely to prove of interest to ornithologists:—

1. Circus macroscelis, Newton; Sharpe, Cat. B. i. p. 73.

I have already described an adult bird of this apecies, received since the publication of my 'Catalogue' (*cf.* Sharpe,

P. Z. S. 1875); and in my account of the Madagascar Harrier I have stated my opinion that there is nothing to separate *C. macroscelis* of Madagascar from *C. maillardi* of Réunion, excepting the slightly larger size of the former and the appearance of bars on the upper tail-coverts and tail. The few doubts which existed in my mind as to the specific identity of these two Harriers are now further diminished by the sight of a young Harrier brought from Madagascar by M. Grandidier, identical in plumage with immature Réunion birds, likewise in the Paris Museum. I believe, therefore, that *C. macroscelis* must become a synonym of *C. maillardi*, the type specimen being probably an immature male in its second plumage. Two of the young birds from Réunion were commencing to get a somewhat striped appearance on the breast. A notice of these birds will be found in Mr. Gurney's paper in the present number, as I handed over to him a letter from Dr. Oustalet on the subject.

2. MACHÆRHAMPHUS ANDERSSONI (Gurn.); Sharpe, *l. c.* p. 343.

The examples of this bird which I have hitherto examined in England have been three in number, viz. a Damara specimen in the British Museum, a Madagascar bird in the same collection, and a third from Madagascar in the possession of Professor Newton. I have considered all these to be adults, but I now believe them to be young birds; for M. Grandidier has presented to the Paris Museum the fully adult bird, which is entirely fuliginous, and closely resembles the Malaccan *M. alcinus*. The Paris example is also from Madagascar, making the third I have now seen from that island.

3. MICROHIERAX SINENSIS.

Hierax sinensis, David, MSS.

M. similis *M. melanoleuco*, sed torque collari albo distinguendus.

I examined two specimens of this pretty little Falconet, which seems to me to be a good species, closely allied to *M. melanoleucus* (Blyth), but differing in having a white nape-band, and in having more black on the sides of the body.

Total length 7·2 inches, culmen ·55, wing 4·25, tail 2·8, tarsus ·9. Both of Père David's specimens had the white nape-band, which I find is absent in Lord Walden's specimen of *M. melanoleucus*, which he has been kind enough to lend me; nor is it mentioned in Mr. Hume's description of the species (Stray F. ii. p. 525).

4. Falco barbarus, L.; Sharpe, *l. c.* p. 386.

I examined an adult specimen of this Falcon, shot by M. A. Bouvier during his expedition to the Cape-Verd Islands. He killed it in a lonely gorge in the mountains. A flock of St.-Jago Sparrows (*Passer jagoensis*) came suddenly in sight, the Falcon following in quick pursuit.

5. Cerchneis tinnunculus (L.); Sharpe, *l. c.* p. 425.

The species named by Swainson *Falco rufescens*, from Senegambia, has been supposed by myself and other ornithologists to belong probably to the dark resident form of the Abyssinian highlands; but I have now examined a series of Kestrels, received direct from Senegal by M. Bouvier, and I can affirm that they are nothing but the ordinary Kestrel of Europe, which doubtless goes to Senegal in winter.

6. Cerchneis naumanni (Fleisch); Sharpe, *l. c.* p. 435.

Sent by the same collector from Senegal to M. Bouvier were several specimens of the Lesser Kestrel, which is thus introduced for the first time as a West-African bird. His correspondent informed M. Bouvier that they were not regular migrants, and only came when there were plenty of locusts, which they followed in flocks along with *Nauclerus riocouri*. The latter was also a bird of irregular and rare appearance; but on the present occasion he obtained five of each species out of the flock.

7. Bubo sinensis, Heude, Ann. Sc. Nat. (5) xx. art. 2.

I examined the type of this species: it has still remains of nestling-plumage and is covered with down, but it is sufficiently advanced to allow of its being identified at once with *Bubo coromandus*; it is therefore not new to science, but is of interest as being the first instance of this bird's occurrence in China.

8. SYRNIUM DAVIDI, sp. n.

Ptynx fulvescens, David, N. Arch. Mus. vii. Bull. p. 4.

S. simile *S. nivicolo* sed multo majus et saturatius: supracaudalibus et caudâ basali immaculatis distinguendum. Long. tot. 20, alæ 14·6, caud. 10·4, tars. 2·1.

Soon after commencing my studies on Owls, Père David pointed out to me that he was convinced that he had shot two species of *Syrnium* at Moupin, one of which was the true *S. nivicolum*, and the other had been determined by M. Jules Verreaux as *Ptynx fulvescens**, and still bore this identification in his own handwriting. On comparing the Moupin example with a specimen of the latter, shot by Père David in Pekin, it was easily seen that the two species were distinct; for *S. rufescens* belongs to the groups of *S. uralense* and *S. nebulosum*, and has, like them, a light-coloured disk, finely irrorated with circular bars of darker brown. The Moupin Owl, on the contrary, has a dusky brown and mottled countenance, so that it comes much nearer to *S. nivicolum*. The uniform upper tail-coverts distinguish it as regards plumage; and its size is very much larger; there are also many other slight differences.

The specimen is a male; and I therefore give the dimensions of a pair of the true *S. nivicolum*, shot by Père David in Moupin:— ♀, total length 15·5 inches, wing 12·8, tail 8·3, tarsus 2·0; ♂, total length 15, wing 11·6, tail 7·5.

It will thus be seen that the male of *S. davidi* is larger than the female of *S. nivicolum*. I am indebted to the courtesy of Professor Alphonse Milne-Edwards for permission to describe this new species, which forms part of the ornithological collection in the Paris Museum.

9. NINOX FUSCA (Vieill. N. Dict. vii. p. 22).

This little Owl, the type of which was known to be in the Paris Museum, has always puzzled ornithologists, and baffled even the acumen of Dr. Pucheran (*cf.* Rev. et Mag. de Zool. 1849, p. 20). I was delighted therefore to be able to determine it at once as the same as *Ninox guteruhi* (Müller)—the locality " Antilles " being evidently a mistake, as the species really comes from Timor. The title of Müller's falls as a synonym; and the species will stand as *N. fusca* (V.). This specimen is the type of *Strix fusca,* Vieill., and *Strix maugæi,* Temm. (Pl. Col. 46).

---

* This species is described in the text of the 'Fauna Japonica' as *S. rufescens*, and as *S. fuscescens* on the plate. It ought therefore to be called *Syrnium rufescens*. It is the more necessary to determine the correct title of the species, because there is a *Syrnium fulvescens* of Sclater and Salvin, from Central America.

10. NINOX VARIEGATA (Quoy & Gaim. Voy. de l'Astr. Zool. i. p. 166, pl. i. fig. 2).

The types of this species show that it is closely allied to *N. squamipila* of Ceram, but differs in having the ear-coverts rufous brown, like the head, while the under surface is white, broadly barred with orange-rufous, the bars being about equal to the intervening interspaces; the under wing-coverts exactly resemble the breast.

11. NINOX HUMERALIS (Hombr. & Jacq. Voy. Pole Sud, Zool. p. 53, pl. iv. fig. 1).

This is a very fine species, of the same group as *N. strenua* of Australia, but smaller and distinguished by its black ear-coverts and orange under surface, which is regularly barred with reddish brown.

12. NINOX TÆNIATA (Hombr. & Jacq. Voy. Pole Sud, Zool. p. 50, pl. iii. fig. 1).

The type is said to have come from the Solomon Islands, and is distinguished from all other members of the genus by its uniform cream-coloured under surface. I doubt, however, if the specimen is really adult; and if not, it will be necessary to see the full-plumaged bird before determining its exact position. The regularly barred upper surface, however, is sufficient to distinguish it from all others of the same size; and I take it to be quite a distinct species.

Having now studied attentively the genera *Carine, Ninox,* and *Glaucidium,* the characters for distinguishing which will appear in my forthcoming volume of the 'Catalogue of Birds,' I think it not unadvisable to give a detailed list of the species which I would refer to these three genera. Those marked with a dagger (†) I have never seen.

1. CARINE, Kaup.

1. *Carine noctua* (L.). Europa.
2. —— *glaux* (Sav.). Africa bor., Palest., Persia.
3. —— *plumipes* (Swinhoe)*. Asia centr., Thibet, Mongolia, N. China.
4. —— *brama* (Frankl.). Ind. peninsula.
†5. —— *pulchra* (Hume). Burmah, Pegu.
†6. —— *spilogastra* (Heugl.). Samchara.

2. NINOX, Hodgs.

1. *Ninox lugubris*, Tick. Himalaya.
2. —— *hirsuta* (Temm.). Ceylon.
3. —— *japonica* (T. & S.). Japan, China, Malacca, Malasia.
4. —— *obscura*, Hume. Inss. Andaman, Nicobars.
5. —— *affinis*, Tytl. Inss. Andaman.
6. —— *ochracea* (Schl.). Celebes.
7. —— *boobook* (Lath.). Austr. merid.
8. —— *ocellata* (H. & J.). Austr. bor. et occid.
9. —— *fusca* (V.). Timor.
†10. —— *theomacha* (Bp.). Nova Guinea.
†11. —— *dimorpha* (Salvad.). Nova Guinea.
12. —— *maculata* (V. & H.). Tasmania.
13. —— *novæ zealandiæ* (Gm.). Nova Zealandia.
†14. —— *forsteri* (Hartl.). Ins. Tonga.
15. —— *connivens* (Lath.). Austr.
16. —— *rufistrigata* (Gray). Ins. Gilolo.
17. —— *strenua* (Gould). Austr. bor.
18. —— *humeralis* (H. & J.). Nova Guinea.
19. —— *franseni* (Schl.). Ins. Waigiou.
20. —— *aruensis* (Schl.). Ins. Aru.
†21. —— *hoedti* (Schl.). Inss. Mysol, N. Guinea.

---

* This may turn out to be *Carine bactriana* (Hutton), as Hodgson's Thibetan specimen is the same as the North-China bird; but Hutton does not mention the feathering of the toes.

22. *Ninox punctulata* (Q. & G.). Celebes.
23. —— *squamipila* (Bp.). Ins. Ceram.
24. —— *variegata* (Q. & G.). Ins. Novæ Hibern.
25. —— *hantu* (Wall.). Ins. Bouru.
26. —— *hypogramma* (Gray). Ins. Batchian.
27. —— *tæniata* (H. & J.). Inss. Solomon.
28. —— *superciliaris* (V.). Madagascar.

3. GLAUCIDIUM, Boié.

1. *Glaucidium passerinum* (L.). Europa.
2. —— *gnoma,* Wagl. Am. centr., Am. bor. et merid.
3. —— *griseiceps,* Sharpe. Guat., Am. centr.
4. —— *pumilum* (Temm.). Brazil.
5. —— *nanum* (King). Chili.
6. —— *cobanense,* Sharpe. Guatemala.
7. —— *ferox* (V.). Am. merid.
8. —— *phalænoides* (Daud.). Ins. Trinit.
9. —— *ridgwayi,* Sharpe. Am. centr., Am. bor. et merid.
10. —— *jardinii,* Bp. Nova Granada.
11. —— *siju,* D'Orb. Cuba.
12. —— *tephronotum,* Sharpe. Am. merid. (?)
13. —— *brodiei* (Burt.). Himal., China.
14. —— *pardalotum* (Swinh.). Formosa.
15. —— *sylvaticum* (Müll.) Sumatra.
16. —— *capense* (Smith). Afr. merid.

†17. —— *leucopse* (Hartl.)*. Ins. St. Thomas.

18. —— *occipitale* (Temm.). Africa.
19. —— *castanopterum* (Horsf.). Java.
20. —— *castanonotum* (Blyth). Ceylon.
21. —— *radiatum* (Tick.). Penins. India.
22. —— *malabaricum* (Blyth). Malabar.
23. —— *cuculoides* (Vig.). Himal., Siam.
24. —— *whitelyi* (Blyth). China, Japan.

With regard to the genus *Glaucidium,* I may mention that I examined a large series of specimens, both in the Paris Museum and in the collection of M. Bouvier. In both these were specimens of a little Owl from Vera Paz—the one in the Museum having being obtained by M. Bocourt during the French Expedition to Mexico, while the other was received direct from the above locality by M. Bouvier. These two specimens agree with the form previously mentioned by me (*anteà*, p. 47) as being in the Salvin-and-Godman collection; and having now seen six examples, all from Vera Paz, I can no longer believe them to be the young of *G. ridgwayi*, and so propose to call the bird *Glaucidium cobanense*. There is also in the British Museum a very pretty little *Glaucidium* which seems to be undescribed, and for which I propose the title

---

* I am not sure if this species is correctly placed in this genus, never having seen it, and I follow Mr. G. R. Gray.

GLAUCIDIUM TEPHRONOTUM, sp. n.

G. suprà plumbeum, collo postico maculis albis vix celatis ornato: pileo dorsoque concoloribus plumbeis: supercilio albo indistincto: genis anticis albicantibus, regione paroticâ fuscescenti-plumbeâ: gutture et corpore subtùs medialiter albicante, pectore et abdomine longitudinaliter brunneo striatis: corporis lateribus et cruribus omninò vinascenti-rufis: subalaribus flavicanti-albidis, exterioribus vinascentibus et minutè brunneo notatis: tectricibus alarum superioribus alisque dorso concoloribus, tectricibus majoribus primariisque paullò brunnescentibus, remigibus intus basaliter flavicanti-albidis brunneo fasciatis: caudâ nigricante, rectricibus omnibus maculis magnis ovalibus albis distinctè notatis: rostro et pedibus flavis. Long. tot. 7·5, alæ 4·05, caudæ 3, tarsi 0·75.

I am unfortunately ignorant of the exact habitat of this pretty little species; but it is said to be from "South America." It was presented to the British Museum by Mr. W. Wilson Saunders, F.R.S.

The last novelty that I have to introduce is not the least interesting, being a third example of the genus *Scotopelia*, which I propose to call

SCOTOPELIA BOUVIERI, sp. n.

S. minor, vix *S. ussheri* magnitudine æqualis: pedibus gracilibus: suprà fuscescenti-brunnea, ubique minutissimè transversim fulvo vermiculata; pileo paullò pallidiore: subtùs fulvescens, latè nigro striata: rostro corneo, ad basin flavicante: unguibus corneis. Long. tot. 17 poll., culm. 1·8, alæ 13·0, caud. 3·0, tars. 2·2.

Hab. Lopé, Ogowé river, Gaboon.

This species is even smaller than *Scotopelia ussheri*, Sharpe, and is at once distinguished by its vermiculated upper surface, both from that species and *S. peli*. It has more the aspect of a true *Ketupa*; but I can discover no trace of auricular tufts. This fine and unexpected novelty was discovered during the recent expedition of the Marquis de Compiègne and M. Marche into the interior of Gaboon, which has resulted in the exploration of hitherto unknown tracts; and as the funds for this expedition were found by my friend M. Bouvier, I have dedicated this species to him, in appreciation of his zeal in the cause of science.

XVIII.—*Notices of recently published Ornithological Works.*

The introduction of a new illustrated ornithological periodical*, and that in the form of a quarto, is an incident of so uncommon occurrence, that we hasten to draw the attention of our readers to Mr. Rowley's 'Ornithological Miscellany,' the first number of which bears the date of January of the present year. As this work is undertaken by a member of the B.O.U., and is dedicated to the members of our fraternity, it behoves us to take special interest in its success. In the first place we may congratulate Mr. Rowley, not without feelings of envy, at his freedom from the usual trammels of editorial ties. He binds himself to no particular branch of his subject, nor yet to dates of issue, nor does he state the number of Parts he expects to produce. All then we have to do with is Part I.; and this treats solely of New-Zealand birds. Mr. Rowley seems to us to make out an excellent case why *Apteryx haasti*, Potts, should be considered a species distinct from *A. oweni*; and four plates, drawn by Mr. Keulemans, show the differences between them. Of the rarer bird Mr. Rowley has examples of both sexes, as well as the young, and is thus in an excellent position to pronounce decidedly upon the subject. Besides figures of these species, one is given of the young of *A. australis* of Shaw. Mr. Rowley's sixth plate gives figures of the feathers of several species of Struthious birds. These well show the different styles of the markings of the two groups of Apteryges; and with these are contrasted the feathers of *Dromæus* and *Casuarius* with their elongated axillary shafts. The wide distinction between *Apteryx* and the Australian *Struthiones,* indicated by the structure of their feathers, is one that is becoming constantly more appreciated by ornithologists, and which the examination of fresh points in their structure seems to force into stronger prominence. The final plate of this Part is devoted to a variety of *Nestor meridionalis,* in which the normal colouring has given place to white, the red markings retaining pretty much their usual character. In his letterpress Mr. Rowley has brought together a good deal of information respecting the different birds on which he writes, and has added many suggestive notes. The plates have all been drawn by Mr. Keulemans, and are excellent examples of his skill.

---

* Ornithological Miscellany. By George Dawson Rowley, M.A., F.Z.S. 4to, Plates. Part I. Jan. 1875: London and Brighton.

The merits of Gilbert White's 'Natural History of Selborne'* are, we doubt not, so well known to our readers, that any remarks of ours on them would be out of place; what we have to do with now concerns the present edition and the manner and circumstances of its production. The acquisition of a number of Bewick's woodcuts by the owners of the copyright of Bennett's edition of White's 'Selborne,' inspired the idea of illustrating this well-known work with woodcuts of an equally well-known wood-engraver and naturalist; and Mr. Harting was applied to to edit the volume. Mr. Harting's part has been judiciously performed; for in curtailing the lengthy notes of his predecessor he has brought them to bear more directly upon the text, and such notes as he has added of his own are concisely written, as notes should be, and strictly to the point. In his own preface Mr. Harting has contrasted the neighbourhood of Selborne as it now exists with the features it presented in White's time, not only as regards the state of cultivation of the land, but also with respect to the changes which have taken place in the comparative rarity or the reverse of different animals mentioned in White's pages. The chief features of White's life are alluded to, and also brief biographies of his well-known correspondents, Pennant and Barrington, and his early commentators, Markwick and Aikin. All White's own notes are entered; and the text has been carefully collated with the original quarto edition. A useful index is added to the volume. The woodcuts ascribed to Bewick are characteristic of the work of that famous artist, but they cannot be said to be the best of his productions; still the book, being carefully got up and printed in clear type on good paper, makes a very nice volume.

---

* The Natural History and Antiquities of Selborne, in the county of Southampton. By the Rev. Gilbert White, M.A. Standard edition, by E. T. Bennett. Thoroughly revised, with additional Notes, by James Edmund Harting, F.L.S. &c. Illustrated with engravings by Thomas Bewick, Harvey, and others. 8vo. London: 1875 (Bickers & Son).

The fifth volume of the 'Annali del Museo Civico di Storia Naturale di Genoa' contains an important work by our Foreign Member, Count Salvadori, entitled "Catalogo sistematico degli Uccelli di Borneo con note ed osservazioni di G. Doria ed O. Beccari." In it we find a complete account of the birds of Borneo, so far as they were known up to the time of the issue of the work. In his introduction, Count Salvadori treats of the scattered knowledge possessed of the ornithology of this important island, and of the number of species recorded from the explorations of various travellers. He then gives a chart of the distribution of Bornean birds, with reference to those of the adjoining islands, as well as a sketch of its physical geography, and finishes his preface with an account of the method he has employed in carrying out his work.

In his account of each species very full synonymy is given, as well as ample references. A complete sketch of the distribution of each species, particularizes with great care all the localities where Bornean birds have occurred in countries adjoining the one on which he writes; and, lastly, notes on the synonymy of every bird mentioned are given, and on the habits of such species as fell under the observation of the Marchese di Doria or Signor Beccari.

The total number of Bornean birds recorded is 392; but, besides these, a number of others are inserted in their places which may reasonably be supposed to exist in the island, but which have not as yet been actually observed. Considering the comparatively small extent of this large island which has been explored, and also its undoubted connexion with the rich Indo-Malayan region, and the variety of its physical conditions, a considerable addition to the birds of Borneo may some day be reasonably looked for. Count Salvadori's work brings the large increase of at least 100 species to what was previously recorded, and will doubtless tend to further very materially the study of Bornean birds. Even since it was published we have a remarkable addition in the singular Pheasant recently described by Mr. Sharpe as *Lobiophasis bulweri*, a figure of it being included in Mr. Gould's recently published part of his 'Birds of Asia.' Mr. Sharpe has also recorded a few additions in a paper on a Bornean collection of birds read before a recent meeting of the Zoological Society.

Count Salvadori describes several new species in his work, besides making some alterations in nomenclature. Thus we have *Jyngipicus fusco-albidus* proposed (p. 42) for *Picus variegatus*, Wagler; *Caprimulgus borneensis*, Wall., MS., is described for the first time (p. 117); *Dicæum nigrimentum* is a new species (p. 165), as are also *Orthotomus borneoensis* (p. 247) and *Prinia superciliaris* (p. 249). The following generic names are also introduced:—*Callolophus* for *Picus puniceus*, Horsf., *P. mentalis*, Temm., and *P. malaccensis*, Lath.; *Arachnophila* for *Nectarinia simplex*, Müll.; *Tricholestes* for *Brachypodius criniger*, Blyth; *Cyanoderma* for *Timelia erythroptera*, Blyth, and *Myiothera melanothorax*, Temm.; and *Orthorhamphus* for *Œdicnemus magnirostris*, Geoffr.

Six (including frontispiece) plates of rather unequal execution illustrate the following eight species:—*Pityriasis gymnocephala*, *Chotorea mystacophonus*, *Pericrocotus ardens*, *Pitta bertæ*, *Setaria pectoralis*, *Jyngipicus auranteiventris*, *Tricholestes* *minutus*, and *Kenopia striata*. Lastly, a copious index of no less than forty-eight pages concludes this work, which must be considered of first-rate importance in its bearing on our knowledge of the ornithology of the islands of the Indian archipelago.

The numerous notes relating to the nests and eggs of Indian birds communicated to him by his correspondents are continued by Mr. Hume in a second part of his 'Nests and Eggs of Indian Birds'*, which has lately reached us. A third, not yet to hand, was expected to be ready in December last. Besides original matter, many extracts are given bearing upon the subjects treated of; so that the path of the Indian ornithologist is greatly smoothed when desirous of breaking fresh ground.

We have not detected any descriptions of new species in this volume; but one new generic name (*Pycnorhamphus*) is introduced, with *Hesperophona icterioides*, Vigors, as the type, but of which no characters are given (*cf.* Gray, H.-l. ii. p. 88).

We have also received two small works by M. Nérée Quépart, to which we would draw attention. One † contains a full account of the Goldfinch (*Carduelis elegans*), both as regards its history, habits, mode of capture, and other points of interest. The other ‡ is a catalogue of the resident and migratory birds found in the environs of Paris. In this catalogue only fifty-three species are included (a very small number it seems to us), though the exclusion of stragglers doubtless makes the total considerably less than if they were also enumerated.

Since we announced the first two livraisons of M. Mulsant's work on the Trochilidæ § in October last (Ibis, 1874, p. 453), two more livraisons have been issued. These complete the first volume of the work, and include the account of the genus *Aithurus* according to M. Mulsant's arrangement.

---

* Nests and Eggs of Indian Birds. By Allan Hume. Rough Draft, Part II. Large 8vo, pp. 237–489. Calcutta: 1874.

† Monographie du Chardonneret. Par Nérée Quépart. 8vo. Paris: 1873.

‡ Ornithologie Parisienne ou Catalogue des Oiseaux sédentaires et de passage qui vivent à l'état sauvage dans l'enceinte de la ville de Paris. Par Nérée Quépart. 12mo. Paris: 1874.

§ Histoire Naturelle des Oiseaux-Mouches ou Colibris constituant la famille des Trochilidés. Par E. Mulsant et feu Edouard Verreaux. Ou-

Having already referred to the object and execution of the work itself, we will confine ourselves to noticing a few points that occur to us in reading M. Mulsant's pages.

Shaw's name, *Lampornis porphyrurus,* for the well-known Jamaican Humming-bird, which Mr. Elliot identified with the true *L. mango* of Linnæus, is adopted by M. Mulsant. Though we entirely sympathize with the author in this and all such cases where changes of names are sought to be made, we cannot but feel the strength of Mr. Elliot's position. The brief Linnæan diagnosis must not only be interpreted by reference to Albin (an untrustworthy authority, never to be forgiven for drawing a Sanderling with a long hind toe!), but also note must be taken of the weighty authority of Sloane and Brisson; and these point to the Jamaican bird as the true *mango* of Linnæus. M. Mulsant rests his case upon the rendering of the words *viridis nitens* of the Linnæan diagnosis, which certainly do apply more accurately to the continental species.

In giving the distribution of *Lampornis* (*Chalybura*) *isauræ,* M. Mulsant mistakes Santa Fé in Veragua for the well-known Santa Fé de Bogota. The bird has never been seen out of the district of Veragua, or (as it should be more properly called) the State of Panama. M. Mulsant is also inaccurate in stating that Arcé obtained specimens of *Lampornis* (*Chalybura*) *urochrysea* in Veragua; we have not yet been fortunate enough to meet with specimens in collections from that district. Of *L. calosoma* the locality remains as yet undetermined, though M. Mulsant states it to be New Granada. For this species he suggests the subgeneric name *Crinis.* We notice that *Doryfera ludoviciæ* is said to be found in Veragua; this is a mistake, the species being *D. veraguensis.* Eight plates accompany these parts, including drawings of *Doryfera euphrosinæ, Thalurania lerchi, Oreonympha nobilis,* and *Diphlogæna hesperus,* none of which has been figured before.

---

vrage publié par la Société Linnéenne de Lyon. 4to: livraisons 3, 4. Paris: 1874.

XIX.—*Letters, Announcements, &c.*

The following letters, addressed "To the Editor of 'The Ibis,'" have been received:—

Bulle, le 1^er^ Février 1875.

Monsieur,—Je vous envoie la description de deux oiseaux que vous m'obligeriez beaucoup d'insérer dans le prochain numéro de l'Ibis.

Il s'agit d'abord de la réhabilitation d'une espèce de Brehm sur laquelle M. J. Vian vient d'attirer mon attention. Les observations de cet éminent ornithologiste que je vous rapporte ici dissiperont certainement tous les doutes à cet égard.

C'est le *Mormon grabæ* décrit pour la première fois par Brehm, Handbuch, p. 999.

Peut-être pourrait-on lui réunir le *Mormon fratercula* du même auteur, dont il diffère peu.

Voici la description du *M. grabæ* de Brehm, complétée par celle de M. J. Vian.

Bec offrant au devant de la membrane nasale 3 bourrelets et 4 sillons, assez élevé au devant du front, où il est étroit; assez élevé au dessus de l'os frontal, mais ne dépassant pas le dernier bourrelet.

C'est le plus petit de tous les oiseaux de ce genre; il se rapproche du *M. fratercula* par la forme de son bec. Mais il s'en distingue par la taille, qui est beaucoup plus petite.

Le *M. grabæ* est le plus méridional de tous les Macareux; car il habite les Féroé et d'autres îles voisines. On le voit aussi très-souvent en hiver sur les côtes allemandes nord-ouest de la mer du nord et sur celles de Hollande. C'est le plus commun des Macareux dans l'Europe centrale.

M. J. Vian ajoute, "Je crois que le *M. grabæ* est une espèce particulière, et l'espèce de France. Voici ses dimensions principales d'après un sujet choisi comme étant des plus adultes sur plusieurs milliers (il y en avait de quoi charger un navire) trouvés morts le lendemain d'une tempête sur les rivages de la mer dans les Basses-Pyrénées, le 20 Sept. 1873.

"Seulement, il est étonnant que le type français soit précisément celui des îles Féroé.

	M. grabæ de France. millim.	*M. arctica* du Groënland. millim.
Long	270	350
Aile	150–500	160–500
Tarses	24	30
Doigt méd. avec l'ongle	40	47
Bec à partir du front	40	52
Bec à partir des commissures	35	43
Sa hauteur moyenne	28	35

"Le *M. grabæ* de France n'a pas de bourrelet à la base de la mandibule supérieure, notamment entre cette mandibule et le front. Le bec est de $0^{m},004$ en surélévation du front, et il existe un creux entre eux. Il n'a pas de rosace aux commissures, pas de membrane cornée aux yeux. Son bec est beaucoup moins élevé, et ses dimensions sont inférieurs de ⅓. La mandibule inférieure est, pour ainsi dire, tronquée en dessus à sa base. La marque grise se prolonge en pointe jusqu'à la nuque, où les pointes se rejoignent, de manière à former une calotte sur le vertex.

"Les naturalistes-préparateurs de Paris ne le reçoivent pas autrement en chair, et ne dépouillent jamais le véritable *M. arctica.*

"J'ai eu en chair le 22 Déc. et fin Janvier le *M. grabæ* avec un bec moitié plus étroit, sans sillons, et de taille encore plus petite de ⅓, mais en plumage complet; il était moins grand qu'un poussin de *M. arctica* encore en duvet du Labrador; le bec était plus développé dans les poussins."

L'autre espèce que je crois nouvelle appartient au genre *Ægithalus.* Mais comme je puis bien me tromper, j'en donne seulement la description, laissant à d'autres le soin de lui donner un nom s'il y a lieu*.

♂. Diffère de *Æg. pendulinus* en ce que le dessus de la tête et du cou est d'un beau roux châtain jusqu'au manteau. A partir de là, le bas du dos et le croupion sont d'un blanchâtre lavé de cette dernière couleur, mais plus claire. Rectrices grisâtres, à bordures blanches, très-larges, ce qui fait paraître la queue presque blanche. Rémiges à bordures externes blanches et très-larges. Sur la poitrine existent des mèches d'un châtain foncé. Long. tot. 0^{m},156 environ.

---

* [This species is most probably one recently described by Severtzoff as *Ægithalus castaneus* ('Turkestanskie Jevotnie,' p. 136).—Ed.]

♀. Plus petite que le mâle, dont elle ne diffère que par les teintes, et surtout le marron du derrière du cou, beaucoup moins vives. Dessus de la tête blanchâtre. Bec couleur de corne.

Hab. Russie méridionale.

Ces deux notices sont extraites d'un ouvrage assez considérable auquel j'ai travaillé depuis plusieurs années. J'avais entrepris de rédiger une Revue des Oiseaux de la France, augmentée des descriptions d'un grand nombre de leurs conspecies exotiques. J'aurais désiré publié cet ouvrage, auquel j'ai donné tous les soins dont j'ai été capable. Mais des obstacles sérieux pouvant faire échouer mon projet, je serai toujours heureux que son titre au moins ne soit pas perdu. C'est pourquoi je vous prie, Monsieur, de vouloir bien l'annoncer dans l'Ibis. Le titre que j'ai adopté jusqu'à présent est le suivant, que je pourrais changer au besoin :—'Revue général des Oiseaux de la France, ou Manuel d'Ornithologie,' comprenant les espèces qui se reproduisent en France ou qui s'y montrent le plus régulièrement de passage, ainsi que la description des espèces exotiques les plus voisines des indigènes, ou susceptibles d'être confondues avec elles.

Recevez, Monsieur, l'assurance
de ma considération très-distinguée,
LÉON OLPHE-GALLIARD.

11th March, 1875.

SIR,—With reference to my remarks on the races of the Condor in the last number of 'The Ibis' (pp. 91, 92), I wish to mention that there is now living in the gardens of the Zoological Society an adult male Condor which does not entirely agree with either the large-combed or the small-combed race. Mr. Bartlett writes respecting it that it "is much smaller than the birds brought to England by Mr. Weisshaupt; the comb and wattles are less developed; it appears to me to be very intermediate between the small and large birds." The

character of the comb and wattles in this specimen, though by no means so fully developed as they were in the large Chilian male purchased by the Society in June 1870, seem nevertheless to approach more nearly to those of the large-combed than of the small-combed race; but the general dimensions of the bird agree (so far I could judge by the eye) with the latter.

Dr. Sclater has been so good as to inform me that Lieut. Clive Strachey, who presented this specimen to the Zoological Society, wrote from Tomé, on the coast of Chile, to say that the bird came "from the Cordilleras."

I am &c.,
J. H. GURNEY.

SIR,—Among a number of very interesting species of birds recently collected in Munipur, and intrusted to my charge by Major Godwin-Austen, is a specimen of *Palæornis melanorhynchus*, Wagler, in luteous plumage. With the exception of the breast, which is tinted with the rosy plum-colour found in the normal plumage, the whole bird is bright canary-yellow. The rosy breast-feathers, however, are normally coloured only at their termination; far underneath they too are bright yellow, an indication of that colour being only observable in the breast-plumage of the normal dress.

Yours,
WALDEN.

Chislehurst, March 1875.

Smithsonian Institution, Washington, D. C.,
March 13th, 1875.

Sir,—The history of *Gymnocitta cyanocephala*, given by me not long since in this Journal*, contained no account of the nest and eggs, these being at that time undiscovered. The account may now be completed, the required information having been satisfactorily contributed by Mr. C. E. Aiken, of Colorado Territory, U. S., a portion of whose article upon the subject, in the 'American Sportsman' (newspaper) of this date, is transcribed, as the original publication is not likely to come under the notice of many readers of 'The Ibis,' and as it is desirable that the same Journal should complete the history of the species.

---

* Ibis, 1872, p. 152.

"Although Maximilian's Jay is quite a common bird in many parts of the west, ... its eggs have never been described, though a nest containing young was found several years ago by Mr. Robert Ridgway [on a low range of hills east of Carson City, Nevada, late in March or early in April of 1868, at which time the young were already flying, as I am informed by Mr. Ridgway, who corroborates the accuracy of Mr. Aiken's observations on the nidification.—E. C.]. On the 12th of May, 1874, I sallied forth with the determination to find, if possible, the nest of this bird. From the fact that these Jays always show a preference for the piñon-clad hills, it is natural to suppose that they would breed among them; and as they are at all times gregarious, I inferred that they would breed in communities; and so it proved. I chose for my field of search a high rocky tract of *mesa* country, well clothed with piñon and cedar, that lies just at the point where the three counties of El Paso, Pueblo, and Fremont meet, and searched a whole day without success. Continuing my search next day in the same vicinity, I chanced to spy in the fork of a piñon tree a nest, which, as I viewed it from the ground, I concluded to be the very one I was looking for; and as I prepared to ascend the tree all doubts in the matter were set at rest by my seeing the parent bird fly stealthily away. Hastily climbing to the nest and looking eagerly into it, I found, not the wished-for eggs, but a half-fledged nestling. This was rather disappointing; but a careful scrutiny of all the trees within a circuit of fifty rods, resulted in the finding of four nests, one of which repaid all my previous trouble; for it contained five eggs unknown to science. Those of you who have had similar experiences can imagine my delight as I first gazed upon these treasures.

"The eggs are of a plump oval form, and five in number. The colour is a very pale greenish blue, plentifully sprinkled everywhere with specks of brown and pale lilac, which congregate and become blended at the larger end. Of the original five, three (which I still retain) measure respectively as follows—1·11 × ·88, 1·12 × ·87, 1·13 × ·88 inch. The nest—a somewhat bulky structure—is composed outwardly of dried twigs, and inwardly of soft bark fibres, and a peculiar grey pulpy substance, which resembles the film to be found on the surface of very old weather-worn boards."

Very truly yours, ELLIOTT COUES.

P.S. The same newspaper contains accounts of the notable occurrence, in Massachusetts, of *Xema sabinii* and *Mimus polyglottus*—both of which are interesting items, although not wholly unexpected. All three of the articles are stated to have been read before the "Nuttall Ornithological Club" of Cambridge, Mass.,—a promising young association, from which we shall doubtless hear more in due time; and I am sure you will join me in wishing it abundant success.

SIR,—Some tendency towards that interest in Arctic discovery which was once taken by all Englishmen having been of late called forth, I may perhaps be allowed to record in 'The Ibis,' without any chance of offending its readers, the addition of two species to the casual avifauna of Spitsbergen. Last summer Mr. Arthur Campbell visited that country; and the sailors of his vessel saw a Raven there, while a Swallow was observed by three of his party in Coal Harbour. Neither this gentleman nor any of his companions, I understand, profess themselves to be expert ornithologists; but with regard to two such well-known birds I cannot conceive that any mistake has been made, and I therefore consider the accidental occurrence of *Corvus corax* and *Hirundo rustica*—the latter, be it remembered, having been already observed in Nova Zembla (Ibis, 1870, p. 306)—in Spitsbergen to be placed beyond doubt. I must add that I am indebted to Mr. Ernest Farquhar for the opportunity of reading the letter from Mr. Campbell containing this information.

I am, Sir, Your obedient servant,

ALFRED NEWTON.

Magdalene College, Cambridge,
20th March, 1875.

THE IBIS.

THIRD SERIES.

No. XIX. JULY 1875.

XX.—*On the Birds of the South-eastern Subdivision of Southern Ceylon.* By W. Vincent Legge, Lieut. R.A.

In the January number of 'The Ibis' for last year, I gave an outline of the distribution of the birds in the south-western corner, or southern hill-region of Ceylon, which consists of a maze of hills ranging from the sea-level up to an altitude of 4500 feet, and possessing the dampest climate in the island. In these notes I gave evidence of the occurrence of birds not previously recorded from that region, such as *Syrnium indranee, Toccus gingalensis, Chrysocolaptes stricklandi, Palæornis calthropæ, Phœnicophaes pyrrhocephalus*[*], *Eumyias sordida, Merops quinticolor, Prionochilus vincens, Phyllornis malabaricus, Dissemurus malabaricus, Drymocataphus fuscicapillus,* and many others. The limit of this subdivision was defined to consist, towards the east, of the eastern slope of the hill-region, which runs from the southernmost point of the island due north, dividing this southern division into two halves:— the one, that before under consideration; the other, that now to be noticed—namely, the immense flat area which comprises the Hambantotta and Kaltsegama districts, and stretches north of them to the foot of the central mountains. I spoke of this region as a remarkably "Indo-Ceylonese" one, which is somewhat noteworthy, seeing that it is adjacent to the typically Ceylonese district of which I was writing. In truth, however, the two localities might well differ *in toto* in the character of their avifauna; for there are, perchance, few spots in the world where the transition from one region to another entirely different is as sudden as the jump from the damp forest-clad hills of the south-west to the arid, dry, scrub-covered plains of the south-east of this island. The wooded plains and the open wastes surrounding the salt lakes or "leways"* of this subdivision, therefore, present us with all the insessorial forms characteristic of most parts of the north of the island, such as *Merops viridis, Hydrocissa coronata, Picus mahrattensis*†, *Xantholæma indica, Upupa nigripennis, Buchanga cærulescens, Kittacincla macrura, Thamnobia fulicata, Temenuchus pagodarum, Munia malacca, Mirafra affinis, Pyrrhulauda grisea,* and *Alauda galgula*; and its leways and wild secluded tanks furnish a long list of the grallatorial forms, likewise characteristic of the north-east and north coasts.

---

[*] Layard does not specify the precise limits of this bird's range. Emmerson Tennant gives its habitat, "confined to the southern *highlands.*"

North of the maritime region the soil improves slightly, the jungle becomes larger, and the rivers are lined with a belt of forest of magnificent trees. These streams are the Wellaway, Kirinde, and Kattregama Gaugas (rivers).

In March 1872, during the N.E. monsoon, I explored the sea-board, making the salt depôt of Kirinde, twenty-four miles north of Hambantotta, my headquarters. My leave being of short duration, I was unable to work the interior, or country lying between the Hambantotta and the central province, and I was compelled to defer my visit to that part until the year before last, when I made a trip through it during the prevalence of the south-east monsoon, choosing that season with the view of looking for the whereabouts of some of our insessorial forms which disappear from the west coast at that time, and which I hoped to meet with in the sheltered jungles of the Wellaway Korle.

---

* Pronounced *lawys*; these are the shallow lagoons from which the Government of Ceylon collects such a large amount of salt.

† I might also include *P. stricklandi*, common in the forests of the northern interior.

Touching our commonest birds, which one is sure to meet with throughout the low country, and which of course are present in these limits, I will not take up room for special notice of them; they may, however, be summed up with our common cool-season "migrants," *Hirundo rustica, Lanius cristatus, Alseonax latirostris, Acrocephalus dumetorum, Phylloscopus nitidus,* about which there is nothing to note, except that the two latter are scarce, and with our insessorial residents, *Cypselus bataviensis, Dendrochelidon coronata, Collocalia fuciphaga, Halcyon smyrnensis, Alcedo bengalensis, Pelargopsis gurial, Megalæma zeylonica, Eudynamys honorata, Centropus rufipennis**, *Leptocoma zeylonica, Arachnecthra lotenia, Dicæum minimum, Campephaga sykesi, Myiagra azurea, Alcippe nigrifrons, Malacocercus striatus, Phyllornis jerdoni, Ixos luteolus, Pycnonotus hæmorrhous, Iora zeylonica, Oriolus ceylonensis, Copsychus saularis, Orthotomus longicauda, Cisticola schœnicola, Corydalla rufula, Acridotheres tristis, Zosterops palpebrosus, Munia striata, M. undulata,* and *Passer indicus,*—touching which I may remark that *Dendrochelidon coronata* and *Eudynamys honorata* are resident here during both monsoons, that *Arachnecthra lotenia* is partially represented by the much more numerous *A. asiatica,* a species fond of dry scrubs, that *Copsychus saularis,* the common Robin of the west coast, is almost entirely replaced by *Thamnobia fulicata,* a very abundant bird in the north of the island and on the whole of the east coast, that *Munia undulata,* our common Finch of the west coast, is replaced to a great extent by *M. malabarica,* a typical species of the north-east. Again, as far as the remaining Orders are concerned, *Turtur sura-*

---

* I am almost sure I once distinguished the green bill of *C. chlororhynchus* in a *Centropus* that flew across the Badulla road, in the Wellaway Korle; but I am not confident enough of my identification to be able to include it in the following catalogue.

tensis (our common Dove) and the universally distributed Waders of the low country, *Actitis hypoleuca, Totanus glareola, Gallinula phœnicura, Buphus coromandus,* and *Ardeola grayi,* muster, in the localities which suit their habits, in the same force as elsewhere.

Ornithologically considered, as well as regards vegetation and features of the soil, this district divides itself into two portions :—the maritime belt, or sea-board, as I shall term it, which consists of the Niagam and Girama pattus*, stretching from north of Kattregama, the neighbourhood of the celebrated Hindoo temple of that name, to the confines of the south-western hill-region, near the town of Tangalle ; and the interior, which consists of the Wellaway and adjoining korles, reaching northwards to the foot of the central-province mountains, bounded on the west by the eastern slopes of the southern hills, and shut in towards the east by ranges of hills stretching towards Batticaloa. These latter wilds, which have never been explored by a naturalist, the whole being one interminable jungle, will no doubt yield us some day some interesting novelties. In the following list I will enumerate all those species occurring in these limits which deserve special notice, and as regards Raptores, will mention one or two whose absence is conspicuous.

1. MICRONISUS BADIUS (Gm.).

This Sparrowkawk is much less common in this part of the island than I suspected. During my July trip I only saw one example in the Wellaway Korle. In many semicultivated districts of the island it is numerous, and, there, is very frequently observed about compounds and cocoa-nut plantations near human dwellings.

2. ACCIPITER VIRGATUS (Temm.).

Thinking that this species might prove one of the treasures of such an out-of-the-way district during the cool season, I looked everywhere for it, but was unsuccessful. All examples that I have as yet met with are from the western side of the island; and for its occurrence in the Galle district see 'Ibis,' 1874, p. 10.

---

* *Pattu* and *Korle* are the vernacular names for the territorial divisions of the island, which correspond to the English county.

3. LIMNAETUS CRISTATELLUS (Temm.).

This Eagle is common in the interior. I observed it in the Wellaway Korle, in the forest-belts lining the river. These localities are the favourite resort of all the large Raptors here.

4. SPILORNIS BACHA (Daud.).

This Serpent-Eagle frequented the rivers of the interior, dwelling in the magnificent forest-trees along their banks. It was invariably to be seen seated on a great overhanging limb, and when flushed would glide along over the sandy bed to another perch a short distance off. In the space of a mile, one day, I saw three examples. A presumably immature male example of *S. bacha**, although the testes were as much developed as in an adult which I procured on the Kirinde Ganga, had a total length of 21·75 inches, wing 15, tail 9, tarsus 3·5, mid toe 1·8, its claw (straight) ·85. Iris yellow, with brown inner circle; cere greenish yellow; legs and feet pale yellow; the throat and cheeks jet-black, with a white chin, and longitudinal gular white streaks; across the fore neck, below the black throat, the feathers are tipped with buff; the whole of the head-, occipital-, and crest-feathers are broadly tipped with buff-white, adjacent to which they are black, fading into fulvous next the white basal halves; the interscapulars, scapulars, and wing-coverts conspicuously margined fulvous grey, which is the most important immature feature in the bird; the centre caudal bar is 1 inch wide, and its adjacent anterior and posterior smoky bars waved transversely with white; the junction of the latter with the subterminal black bar is indistinct, the black and the brown melting into one another; the ventral white spots are circular, but they possess the dark circling observable in the adult. I presume this is the plumage of Blyth's *S. spilogaster*; or is this latter to be recognized as a valid species?

---

* In my paper in 'The Ibis' of last January, where, at page 9, I speak of *Spilornis cheela*, it must be understood that the present species is re-

5. Cuncuma leucogaster (Gm.).

This Eagle is local in this district, as, in fact, it is in all other parts of the coast; it is rarely found about the leways, but frequents the coast-line almost entirely. I observed it frequently in the Kattregam division of the Magam Pattu, to the north of Kirinde, which is the next salt-station beyond Hambantotta. Throughout Ceylon its favourite resorts are the large brackish lakes near the shore, and the harbours and arms of the sea with which the coast, particularly in the north-east and north, is intersected.

6. Polioaëtus ichthyaëtus (Horsf.).

This fish-Eagle does not frequent the leways; it is found about the mouths of the large rivers, but it is not nearly so abundant as it is in the east and north-east of the island. In confinement I have found this bird to be exceedingly noisy and querulous; but it thrives well in an aviary notwithstanding. The markings of the tail in the immature dress change very much with time during the first year, the mottled brown portion of the centre paling into grey; this colour being the predominant hue, shows out the subterminal bar (which likewise becomes pale) more plainly than in the early part of the stage. The tawny hue of the breast fades out almost entirely before the end of the first year. In this stage the iris is yellow-brown; in the adult, clear yellow beautifully mottled with brown.

7. Circus swainsoni, Smith.

8. Circus cineraceus (Mont.).

9. Circus æruginosus (Linn.).

I met with occasional examples of the two first-named Harriers, in March, about the open scrubby lands along the coast, *C. cineraceus* being more frequent here than in most parts of the island. *Circus æruginosus* is much less abundant here than

---

ferred to, *cheela* being the specific name used by Layard, whom I chiefly followed in my identification of the birds of the south-western district. My using the specific title of the northern and larger form was a great blunder.

in the south-west, where the open paddy-lands are more suited to its habits than the hot "wastes" of this district.

10. Haliastur indus (Bodd.).

Not abundant in the maritime district, but occurs far inland in the Wellaway Korle about tanks.

11. Milvus govinda, Sykes.

Milvus affinis, Gould.

I observed no example of the Pariah Kite in either season; and it is very rare in the south-west (Ibis, 1874, p. 10).

12. Elanus cæruleus (Desf.).

I met with several examples of this Kite in the vicinity of inland tanks; it occurs here more frequently, perhaps, than in any other part of the island.

13. Ketupa ceylonensis (Gm.).

Numerous in the forests on the banks of the rivers, particularly in the Wellaway Korle. I saw nothing of our Wood-Owl, *Syrnium indranee,* which occurs frequently in the other subdivision of the south, the hill country (Ibis, 1874, p. 11).

14. Ephialtes backamuna.

This little Owl is less frequent here than in the south-west. It affects cultivated districts far more than wild jungle-country.

15. Ninox hirsuta (Temm.).

In my notice of the birds of the south-west or the southern hill-region, I omitted this species. For a long time I was accustomed to hear early in the evening and late in the morning, when in the interior of that district, particularly along the Gindurah, the note of an Owl, which I was unable to trace to its proper source. Since writing my paper I succeeded in shooting the bird while hooting, and thus found that this species, supposed to be rare in Ceylon (*vide* P. Z. S. 1872, p. 418), was very numerous in the south-west. Last year I found it very common in the Wellaway Korle, its note being my constant evening and morning entertainment, as late as 7 A.M. I have heard it monotonous *whooo-wuk, whooo-wuk, whooo-wuk,* in more than one direction, around some lonely tanks; but notwithstanding its frequent occurrence, I only procured two examples, as it is exceedingly shy. The stomach of one of them was crammed with the common small green beetle of the country. It fell to my gun about 2 P.M.; and at that time its food was undigested, proving it to feed very late in the morning. The dimensions of both my specimens are less than those given by Mr. Hume for a Nicobar example (Str. Feath. vol. ii. p. 152). They are:—

	Length.	Wing.	Tail.	Tarsus.
1. ♂	10·6	8	4·3	1·1
2. *juv.* ♂	10·3	7·7	4·25	0·95

The iris in the young bird is dusky yellow, in contradistinction to the golden yellow of the adult, the feathers of the throat margined with a shining ochre-yellow, and the brown of the under surface much darker than in the adult, with much less white, particularly noticeable in its absence from the abdominal region.

16. HIRUNDO HYPERYTHRA, Layard.

The Ceylon Swallow is common in the vicinity of tanks in the Wellaway Korle; but I did not notice it in the Hambantotta district, although it is abundant along the sea-board of the south west.

17. CYPSELUS AFFINIS, Gray.

I found this Swift breeding in the houses at the salt-depôt at Kirinde, in March 1872. It is common throughout the coast-region, and the "colony" at Kirinde must have numbered sixty or seventy pairs. The nests were placed between the tiles and the rafters of the verandas, and were constructed of cottony substances interwoven with grass-stalks.

18. ACANTHYLIS GIGANTEA (Temm.).

This magnificent Swift, which I have never seen recorded from the low country, occurred once on the borders of this district during my trip in July 1873. During a heavy squall from the south-west a large flock appeared on the coast, hawking near the ground on the hill at Tangolle. They came, as far as I could judge, from the south, and disappeared a short time after the shower was over, flying due north, towards the hills, where I had once observed them during my explorations (Ibis, 1874, p. 13). They had evidently been hawking at an immense elevation, probably equal to that of the southern-province hills, and had been driven down by the heavy rains.

19. CAPRIMULGUS SPILOCERCUS, Gray.

20. CAPRIMULGUS ASIATICUS, Latham.

Both numerous in various parts, the latter mostly in the open sandy wastes and scrubs along the sea-board; but the former is equally abundant, both here and in the Wellaway Korle. Its remarkable note at once tells the tale of its presence in a locality.

21. HARPACTES FASCIATUS (Forster).

Occurs in the forest on the banks of the Kirinde Ganga, but is less frequent than I anticipated.

22. MEROPS VIRIDIS, Linn.

Abundant both in the maritime region and in the interior. This species breeds in the sand-hills of Hambantotta. Its range in Ceylon is from the maritime regions of the north, north-west, and east, down the whole of the east side of the island, and round the south-east as far as Tangalle. I have never seen it on the southern half of the west coast; but Mr. Holdsworth has observed it at Colombo, although I never saw it during a three years' residence in that part. The blue throat (*vide* Mr. Holdsworth's catalogue, P. Z. S. 1872, p. 422) appears to me to be a marked characteristic of maturity; this part in the young bird is yellowish green, surrounded by the pale green of the adjacent parts of the fore neck, the throat-band being at that period ill defined and narrower than later on. I traced this bird all along the Hambantotta and Badulla road to the foot of the hills.

23. MEROPS PHILIPPINUS, Linn.

Not so numerous as the above. I observed it a good deal near tanks in the Wellaway Korle. It is found all over the island in the season, affecting the highest pattus of the central province.

24. Ceryle rudis (Linn.).

Affects the leways along the coast. I did not observe many along the shaded rivers of the interior; it is a bird which always affects exposed situations.

25. Hydrocissa coronata (Bodd.).

Our large Hornbill I met with about the tanks, where there is forest, in the Kaltsegama district, and along the rivers of the interior.

26. Toccus gingalensis* (Shaw).

The Hornbill is abundant along the Hambantotta and Badulla road, commencing at a point some fifteen miles north of the former place. I met with it always in the forest on the river-banks throughout the Wellaway Korle. What appear to be birds of the year, although in two instances the ova were well developed, are smaller than adults, and have the bill almost wholly brown. The amount of white in this organ varies with age, from a streak on the side to the almost white bill, with dark patch just anterior to the eye, and dark wash at the base beneath, of old birds. The white markings of the primaries and rectrices are irregular during immaturity; in one example before me, the fifth quill of one wing is almost entirely white, save a black patch adjacent to the normal white tip, while on the corresponding feather of the other wing there is a white line down the centre of the black inner web. Five adult examples measure in the wing 8·25 inches, and in the bill, from gape straight to tip, 3·5.

27. Palæornis torquatus (Bodd.).

28. Palæornis eupatrius (Linn.).

29. Palæornis rosa.

P. torquatus is abundant in the scrubs of the coast-district; and *P. eupatrius* and *P. rosa* I met with on the Badulla road and on the banks of the Kirinde Ganga. I think it is now an established fact that our large Parrakeet is a much smaller bird than the Indian form. Wings of females measure as low as 7·4, and those of young males between 7·4 and 7·6. I have not yet procured an adult male with a wing exceeding 8; but I may have come upon small examples. The depth of the upper mandible of such a one is 0·8.

---

* The Hornbill of the south-western forests may perhaps be distinct; but a large series must be got together before the question can be decided. It is an extremely shy bird, only one example falling to my gun in two years' collecting. It has the bill half an inch longer, more curved and pointed, and more notched than this form.

30. Picus mahrattensis, Lath.

Tolerably frequent in the Euphorbia scrubs of the coast and in the low jungle of the south in the Wellaway Korle.

31. Chrysocolaptes æstivus (Bodd.).

I procured an example (♀) in the Kattregama district, on the Kirinde Ganga, in March 1872. The note of this Woodpecker is remarkable for its faintness. The wing of my example measured 2·8 inches, bill to gape 2, tarsus 1·05, total length 11; iris brown; bill blackish, legs and feet dull greenish slate.

32. Chrysocolaptes stricklandi*, Layard.

This species, which has, until lately, been looked upon as entirely a hill-bird, is common in the Wellaway Korle, particularly in the forests along the Kirinde Ganga. I met with it within fifteen miles of the sea near Tissa Maha Rama, in March 1872, and found it constantly in the interior in March 1873. Immature birds, even up to the second year, have much brown about the bill; and I have never got an example yet that had not the culmen, just anterior to the forehead, washed with dusky.

33. Micropternis gularis, Jerdon.

Tolerably frequent near the Kattregama hills and in the Wellaway Korle.

34. Chrysophlegma chlorophanes (Vieill.).

This Woodpecker, I imagine, is rare in this district. I met with but one example, in thick jungle near Tanamalvilla, on the northern boundary of the Magam Pattu. Its shy and retiring habits, however, tend always, more or less, to its being passed over.

---

* This species is equally common in the forests of the northern interior, and likewise along the north-east coast, *vide* 'Stray Feathers' (vol. iii. no. 1, and vol. i. p. 346).

35. Brachypternus ceylonus, Forster.

Very abundant in the Wellaway Korle. I found it all along the Badulla road and in the heavy jungle near the Kirinde Ganga, where I frequently noticed *Dissemurus malabaricus* chasing it out of trees which it was affecting, the Dongo appearing to entertain no kindly feelings towards it.

36. Xantholæma indica, Lath.

A characteristic species of the north, and very numerous in the Wellaway Korle and north of the Magam Pattu. I traced it as far west as Tangalle, where it suddenly comes to a halt. This Barbet has never been recorded from the south until now.

37. Xantholæma rubricapilla (Gm.).

This characteristic species of the south-west and western districts is, in this region, by no means frequent; I met with it only in the jungles near the rivers in the Wellaway Korle.

38. Cuculus sonnerati, Lath.

39. Polyphasia passerina, Vahl.

40. Coccystes jacobinus.

These Cuckoos all occur in the low jungles of the sea-board. *C. sonnerati* is rare; but the elegant *P. passerina* is very abundant in the scrubs. *C. jacobinus*, I observed in July; and it is therefore evident that a partial migration from the southern half of the west coast takes place to this region during the south-west monsoon, as I have never seen it between Colombo and Dondra Head during the prevalence of that wind.

41. Zanclostomus viridirostris, Jerdon.

Abundant in the maritime region and in the low jungle-districts of the interior. This skulking bird occurs almost everywhere in the low country where thick scrubby jungle abounds, but, on account of its shy habits, often escapes observation.

42. Phœnicophaes pyrrhocephalus, Forster.

I did not observe this species myself; but it was described to me as having been seen and shot in the forest near Tissa-Maha-Rama: as it was procured by me in the forests of the northern province (*vide* 'Stray Feathers,' vol. i. p. 346), I may safely say that it is distributed throughout most of the low-country forests in the island.

43. Taccocua leschenaulti, Lesson.

The previous history of this species as a Ceylonese bird is contained in Mr. Holdsworth's "Catalogue" (P. Z. S. 1872, p. 433). Its first occurrence, on the evidence of an example procured by a Mr. Laurie in the great upland valley of the central province, which I had the pleasure of examining, is there recorded. My discovery of it in this region shows it to have rather a singular distribution in the island; it appears also to be resident in the flat jungle-clad plains of this part of Ceylon. In March 1872 I observed it three or four times in the Euphorbia scrubs between the salt-depôt of Kirinde and the Tissa-Maha-Rama temple; but I failed to procure a single specimen, as it was always in the long grass close to the edge of the jungle, into which it darted with such speed that I missed it. In July 1873, however, I was more fortunate, procuring two fine specimens on and near the Badulla road, about twenty miles north of Hambantotta. After darting into the edge of the jungle, it sometimes rests a moment in the tree in which it alights, before threading its way through the branches, like its kindred genera, and thus affords a chance of a shot. In this way I got both my birds. Mr. Laurie's specimen (*loc. cit.*) was a male; both mine are females, differing somewhat in size and under-colouring, the under surface of the largest example being more rufous than that of the other. The following are the dimensions of these birds:—

	1 (♀). in.	2 (♀). in.	3 (♂). in.
Length	16	uropygials shot away.	16 (from skin).
Wing	6·1	5·9	6·1
Tarsus	1·65	1·6	1·85

	1 (♀). in.	2 (♀). in.	3 (♂). in.
Anterior toe	1	1	
Claw, straight	0·35	0·35	
Tail	8·4		8·35
Bill, gape to tip, straight	1·4	1·45	
Bill, height at anterior edge of nostril.	1·2	1·4	

To account for the difference in size, one of my examples may have been a young bird, although the ova appeared to be equally perfect in each. Neither was in moult, as the remiges were full-grown in both. In the smallest bird (which, however, had the largest bill) the iris was red, with a yellow outer margin and purplish inner circle; in the other very little trace of the yellow circle was perceptible. The tarsi and feet were plumbeous blue, and the bills dull cherry-red, with yellowish tips and an angular marginal black patch at the centre of the curve, continued to the gape as a fine line. The above measurements, it will appear, exceed those of Indian examples given by Jerdon, who omits to notice the strong metallic green sheen of the rectrices, and likewise of the scapulars and tertials. The stomachs of my birds were crammed with grasshoppers and a species of *Mantis*. They appear to come out in the mornings and evenings into the open, at which time only I have seen them.

44. ARACHNECTHRA ASIATICA (Lath.).

Abundant in the scrubs of the maritime district and low jungles of the Wellaway Korle. Its congener, *A. lotenia*, is not plentiful here, as it is in the western province and south-western hill-region. I find *A. asiatica* is always most abundant in dry scrubby districts.

45. DENDROPHILA FRONTALIS (Horsf.).

Abundant in the forest banks of the Wellaway-Korle river during the south-west monsoon. This species is a straggler to the western-province low country from the hills during the north-east monsoon. Specimens have been procured there at Net Lavinia, near Colombo.

46. UPUPA NIGRIPENNIS, Gould.

Found in the maritime districts *throughout the year*, but most numerous during the north-east monsoon. A fine male, procured 10th July, 1873, measured in total length 11·75, wing 5·5, tail 4, bill from forehead *straight* to tip 2·25. My experience accords with Mr. Holdsworth's in proving the markings of this Hoopoe to vary considerably. In one male example I have, there is no white spot on the 1st primary.

47. TEPHRODORNIS PONDICERIANA (Gm.).

Plentiful in the maritime districts and in the Wellaway Korle, more especially in the south-west monsoon. Its occurrence here at this latter season proves that a partial migration takes place from the south-west coast towards the east at that time, and *vice versâ* during the north-east monsoon, at which time it is most plentiful in the Galle district.

48. HEMIPUS PICATUS, Sykes.

This little Shrike is common in the low country as in the hills. I met with it in this district often in the jungles of the Wellaway Korle. In the western province, too, I have procured it near Colombo during the south-west monsoon.

49. GRAUCALUS LAYARDI, Blyth.

This is a local species in Ceylon. It is found in but few localities in the western province, and, as regards the Kandy country, seems to be confined chiefly to the valley of Doombera. In this district, however, it is very numerous. I met with it frequently in the jungles of the Wellaway Korle, where I found it affecting dead trees in clearings and open places. I see Lord Walden doubts the distinctness of this bird from *G. macæi*, Lesson (Ibis, 1873, p. 312); and Mr. Hume thinks that age has much to do with the markings of the under surface (Str. Feath. vol. i. p. 435). Jerdon's diagnosis (Ibis, 1872, p. 117), with regard to the markings of the under wing and tips of rectrices, does not seem to hold good; both these characteristics, I think, vary with age. In two males before me (they may not be fully adult) the under wing-coverts are almost pure white; under the metacarpal joint and ulna, and on a few of the longer feathers, there are some light bars; the three lateral rectrices, in one example, have white tips from $\frac{1}{2}$ inch to $\frac{1}{10}$ consecutively; the two next have the extreme tip white; and in the other bird the uropygials even terminate in conspicuous white tips, the abdomen and under tail-coverts are pure white, but the lower breast-feathers are strongly barred; whereas in a female* the barrings of the latter part are almost obsolete, and the belly, abdomen, and under tail-coverts are pure white. The sex of these specimens was carefully determined. Dimensions as follows:—

	Length.	Wing.	Tarsus.	Bill to gape.
♂	10·25	5·9	1	1·4
♂	10·1	6·0	1·1	1·45
♀	not taken in flesh.	5·85	1	1·35

Males differ from females in the depth of upper-surface hues and lower barrings; and the latter are, to my mind, lighter throughout, particularly as regards the bars of the breast.

50. Pericrocotus flammeus (Forst.).

51. Pericrocotus peregrinus (Linn.).

Both frequent in the jungles of the interior, twenty miles north of Hambantotta.

52. Buchanga cærulescens (Linn.).

The occurrence of this Dongo in the Wellaway Korle surprised me as much as did that of the little "Coppersmith" (*Xantholæma indica*). I observed it in July along the Hambantotta and Badulla road.

53. Buchanga leucopygialis, Blyth.

This, the Ceylon ally of the above, is very numerous in the interior.

54. Dissemurus malabaricus (Scop.).

Numerous in the forest along the Kirinde Ganga. The notes of this showy bird are charming and most varied; and its constant presence is a pleasing feature of the beautiful forest-shaded rivers of the south coast. There I have often, while reclining on some gravelly bank in the partly dry river-bed beside the scanty stream which is then the representative of a rushing torrent in the wet season, been delighted in listening to its lively notes and watching its quick movements in the magnificent mahogany trees over my head.

---

* Probably a very old bird.

I have a considerable series of examples with tails in all stages, and at no period do I find any resemblance to those of *D. lophorhinus.* They appear to breed in this part about May; for on the 3rd July I shot a female in nestling-plumage, with the iris light brown, and the tarsi with the lower part bluish, changing above to the black of the adult. The frontal crest was scarcely recurved at all, but projecting forward, as in *lophorhinus*; the feathers of the head and back of the neck were round-tipped, and the under tail-coverts not barred white as the under wing-coverts, but with only one spot at the tip of one of the longest feathers. The lateral rectrices were 3·35 inches longer than the uropygials; in the finest *lophorhinus* the difference does not exceed 2·6; the web was well turned up and over at the tip, as in the adult, with a small indentation adjacent to the tip of the penultimate, looking as if the margin had been burnt, and leaving a width of ·23 in the web. The total length of this example was 13 inches, with a wing of 5·75. In the second year the crest is recurved, though not so lengthened as in old birds, the under tail-coverts are barred white, and of course the under wing-coverts spotted with the same; and in a female, now before me, the lateral rectrice is 4·75 longer than the uropygials, with quite a perceptible edging to the shaft at the denuded part, leaving a width of ·07 at its narrowest: the iris is brownish red, and the wing 5·75. In the most adult bird, and, at the same time, the largest male that I can pick out of a series of eight now before me, the lateral rectrice is 6·4 longer than the uropygials, and the shaft is almost completely denuded; the iris in this is deep red, the under tail-coverts unspotted; but the under wing-coverts have two solitary spots as a remnant of the immature dress. The above diagnosis will, I think, prove that the short tail is a characteristic of immaturity, and not an individual variation.

55. Tchitrea paradisea (Linn.).

I found this species abundant in the Wellaway Korle in the month of July; it was most commonly to be seen round tanks and in the forest near the rivers. I visited this region for the purpose of searching for several birds which disappear at this season from the west and south-west; and this was one among the number. Nearly all the birds I saw were in the red stage. I traced it no nearer to the sea-board than fifteen miles at this monsoon, but found it near the coast in the other.

56. LEUCOCERCA AUREOLA, Less.

This Flycatcher, which is tolerably rare on the western side of the island, and not often to be seen in the northern interior of the island, was plentiful in July in the Wellaway Korle. It extends as far west as Matara, near Dondra Head, at this season. The only birds I have seen in the south-west have occurred there during the north-east monsoon.

57. PITTA BRACHYCERCA, Linn.

As abundant in the scrubs of the maritime district—Hambantotta to Kattregama—as it is in the north of Ceylon. It is also very numerous in the south-west (Ibis, 1874, p. 18).

58. PYCTORHIS SINENSIS (Gm.).

This incorrigible little skulker, so rare in most parts of Ceylon, has, I think, its headquarters in the dry jungles of the sea-board and inland for some 20 miles. It abides throughout the day in silence in the dense scrubs, and comes out in the morning and evening into clearings in the jungle, or on to the bushy flats round the leways, and gives a long loud whistle from the top of a bush; but it is off like a shot when it sees you. It is a most difficult bird to kill, fighting and scratching when taken up wounded, and, if winged, makes off into the densest dead wood and grass with as much speed as a rat.

59. DUMETIA ALBOGULARIS, Blyth.

Numerous in suitable spots in the interior, and breeds in June and July. I found one nest, a large ball of dry soft grass, fixed in a low bush close to the ground, containing three young.

[To be continued.]

XXI.—*The Birds of Transylvania.* By Charles G. Danford, and John A. Harvie Brown.

Part II.

*1. **Gypaetus barbatus** (L.). *Zerge Sas* (Chamois-Eagle); *Szakálos Keselyü* (Bearded Vulture).

Not rare in the higher mountains, but seldom descending into the low country: nests in rocky situations. Danford saw it in autumn at Petroseny, near the Vulcan Pass, and among the high hills in the neighbourhood of the Retjezát; and HH. Csáto and Buda Ádám observed many, especially about the Jorgován Köve, where they counted as many as fifteen at a time. The specimen in the Klausenburg Museum was shot at Rodenau, in the Nassoder district.

*2. **Vultur monachus**, L. *Dög Keselyü* (Carrion-Vulture).

Common throughout the country, both on plain and mountain: breeds among rocks. We came upon a flock of twelve feeding on a buried horse, which had been laid bare by the Wallach dogs, on the road-side near to Maros-Ludás; and we also saw some at Hátzeg.

*3. **Gyps fulvus** (Gmel.). *Szöke Keselyü* (Light-coloured Vulture).

Not so common as the preceding, but well distributed, keeping more to the mountains, where it breeds. It is generally seen during warm weather. Herr Ottó met with it at Záh and at Gyéké.

4. **Neophron percnopterus** (L.). *Csont Keselyü* (Bone-Vulture).

Very rare, but has been occasionally seen in the lowlands in autumn; and the young have, according to Herr Buda Ádám, been brought from the mountains near Hátzeg. Herr Buda Elek saw one on the carcass of a sheep at Russ; and in 1860 Herr Buda Ádám observed one on the banks of the Strell. Both these observations were made in summer.

5. **Falco sacer**, Gm.

Very rare. Bieltz mentions *F. lanarius*, L., as occurring;

but from his description we think it is undoubtedly *Falco sacer* (*vera*) that is meant. Herr v. Pelzeln has informed Danford that he considers it much more likely that *F. sacer* occurs in Transylvania than *F. lanarius*. Both species have occurred, however, on the Theiss (*Zelebor*).

*6. FALCO PEREGRINUS, Gmel. *Sólyom.*

Not common. We only saw one, and that in the neighbourhood of Görgény. Hátzeg and Mühlbach are other localities. It is more abundant in winter.

Obs. Graf Lázár thinks that *Falco peregrinoides* occurs in Transylvania.

*7. FALCO SUBBUTEO, L.

Common. We got one and saw sundry other specimens at Záh, in the Mezöség. It is said to breed in the country, but does not remain over the winter.

*8. FALCO ÆSALON, Tunstall. *Törpe Sólyom* (Dwarf Falcon).

A bird of passage, chiefly to be found in winter, and not breeding in the country. Danford has seen them in autumn; and probably on one occasion we saw it during our visit to the Mezöség. Herr Buda Elek says that he has never observed them later than the middle of March, and that the young birds are the commonest.

*9. FALCO VESPERTINUS, L. *Veres lábu Sólyom* (Red-footed Falcon).

Common. We saw them in the south at Hátzeg, where they had been very numerous, but were then leaving, the migration generally lasting there from the middle of April to the beginning of May. We found them again further north at Záh, in the Mezöség, where they seemed to be breeding. A few solitary birds may be met with during the autumn. Herr Ottó says they nest in the poplar trees near houses. Writing at Benczencz, in 1860, Graf Lázár says they "used to come every second year in flocks of 2000 or 3000, but now, since the last three years, come annually."

10. FALCO CENCHRIS, Cuv. *Fehér körmü Vércse* (White-clawed Tower-Hawk).

Herr Buda Ádám says that this bird is not uncommon at

Mühlbach, where he has seen them, and where he tried to take the nest in the hollow oak trees in which they breed every year. Bieltz gives the Stadtwald, near Hermannstadt, and the rocks in the Rothenthurm Pass (where he says it probably breeds) as localities. Herr Csáto says that it is rare in the Strell valley, appearing in spring and leaving in autumn. It is the first migratory bird to leave the country.

*11. FALCO TINNUNCULUS, L. *Vércse* (Tower-Hawk).

Very common everywhere: does not generally remain over the winter, but arrives in March and April, and leaves in the late autumn. It has, however, been known to stay, as Herr Ottó frequently saw about ten pairs at Klausenburg in the cold December of 1868, a winter in which field-mice were unusually abundant.

12. ELANUS CÆRULEUS (Desf.).

We insert this on the authority of Graf Lázár ("Kurtze Beiträge zur Ornithologie Siebenbürgens"), who states that one was killed at Benczencz, where he lived.

*13. PANDION HALIAETUS (L.). *Halász Sas* (Fisher Eagle).

Generally distributed, but not common. We saw a couple by a lake near Záh about the middle of May. Herr Ottó, though he had seen them both at Záh and at Gyéké-Czég, had not, in 1872, discovered where they breed. They may also be met with in summer on the Strell.

14. PERNIS APIVORUS (L.).

Rare. It has been found breeding in a wood near Leschkirch and at Nagy-Enyed. There is a specimen in the Klausenburg Museum which was killed at Györgyfalva.

*15. CIRCAETUS GALLICUS (Gm.). *Kigyö Sas* (Snake-Eagle).

We shot a fine male specimen in a wood at Szent Mihály, near Klausenburg. The eyes of this specimen were bright lemon-yellow, and the same colour as the cere. Authorities are agreed as to its breeding in the country, and state that it is not uncommon. Known localities are the Bük (beech) wood near Klausenburg and woods near Piski; and Herr Buda has shot several at Hátzeg, and seen them often.

*16. HALIAETUS ALBICILLA (L.).

Rare. We saw one bird at the lake at Tóhát, in the Mezöség. Herr Klir says he has also seen it at Gorbó, near Klausenburg. The high mountain-lake of Zenóga, in the Southern Carpathians, and the willow-thickets on the Strell in winter, are given by Herr Buda Ádám as localities. They are found on the mountain-streams when the trout ascend to spawn.

*17. AQUILA CHRYSAETUS (L.). *Havasi Sas* (Mountain-Eagle); *Szirti sas* (Rock-Eagle).

Common, especially in autumn, when they frequent the low country. They nest in rocks and trees, and have been known to breed so low down as the Hátzeger Wald. We saw them on various occasions at Hátzeg, in the Mezöség, near Görgény, and in the mountains around Fanczal.

18. AQUILA HELIACA (Savigny). *Király Sas* (King-Eagle).

Not rare. Hermannstadt and Körösbanya are given as localities by Bieltz. Herr Csáto says that it is not uncommon on the Retjezát, and Herr Buda that he believes it breeds there. Herr Buda had one in captivity for some years; it never assumed the old plumage; and another bird of this species, as Herr v. Pelzeln informed Danford, lived seven years in the menagerie at Schönbrunn without losing the striated plumage of the young bird.

19. AQUILA CLANGA (Pall.).

Very rare. It is said to breed in the neighbourhood of Hermannstadt; and Herr v. Pelzeln thinks it "most probable that it breeds in Transylvania."

*20. AQUILA NÆVIA, Gm. *Kialtó Sas* (Screaming Eagle).

Common and generally distributed in all woody mountainous districts. We saw it at Szent Mihály, Görgény, and more frequently at Fanczal, near which place they were evidently breeding. We were, however, most unfortunate in not being able to obtain any specimens.

21. AQUILA PENNATA (Gm.). *Törpe Sas* (Dwarf Eagle).

Rare. In July 1859, Graf Lázár records one as having been shot at Benczencz while it was hunting the Turtledoves about the buildings. It was only winged, and lived for twelve days. Graf Lázár also found them breeding in the woods near Broos. Herr Buda Elek shot one during summer in a wood at Brettye, on the Strell. It has also been met with by Herr Stetter at Rodna in the north.

*22. Buteo lagopus (Gmel.). *Havasi Ülü* (Mountain-Hawk), and *Gatyás Ülü.*

Herr Ottó records that great numbers appeared in the end of November 1866, and until February of the following year were very diligently employed in mouse-catching. It is not rare, but only appears in winter. Herr Csáto found them among high trees on the Strell. A specimen shot at Klausenburg is in the Museum there. Danford saw one at Kronstadt this autumn.

*23. Buteo vulgaris, Leach. *Egerész* (Mouse-catcher).

Though generally distributed and common throughout the country, it is doubtful whether we saw a single specimen during our present visit. They are, however, plentiful at Hátzeg and on the Strell during autumn.

*24. Milvus ictinus (Savigny). *Kánya.*

We only saw two birds—one which we shot near Klausenburg, and another which we observed near Szent Mihály. They are common at Klausenburg and other localities in autumn.

*25. Milvus migrans (Bodd.). *Barna Kánya* (Brown Kite).

Very common in the Mezöség. We saw many near Tóhát, where we found them nesting. Woods being scarce in that district, the tree-building birds are brought into close contact, and on one occasion we found a Black Kite, a Raven, and a Hooded Crow breeding close to each other. In other parts of the country the present species appears to be less common.

*26. Astur palumbarius (L.). *Galambász* (Pigeon-catcher); *Tyúkbász* (Fowl-catcher).

Generally distributed and common, breeding on high trees, and remaining throughout the year. We saw it at Hátzeg and in the Székler country.

*27. Accipiter nisus (L.). *Madárász* (Bird-catcher).

Common, but said to be less so than formerly. It remains throughout the year. We saw it at Záh and in the Székler country.

*28. Circus æruginosus (L.).

Rather common in the autumn at Hátzeg, Klausenburg. The only specimen we can be sure of, was obtained by us on one of the little marshes near the latter place; but we may have seen others in the Mezöség. This species was unusually abundant in the winter of 1868–69, probably in consequence of there being a good supply of field-mice.

*29. Circus cyaneus (L.). *Szürke Ülü* (Grey Harrier).

Very common at Hátzeg, Bánffy Hunyad, &c. In autumn Danford has seen as many as twelve on the wing at one time in the cornfields. Solitary old males are sometimes found during the winter, though this species, in common with all the Harriers of the country, is migratory.

30. Circus swainsoni, Smith.

Rare. According to Bieltz, it has been obtained near Hermannstadt; and Herr Buda Ádám says it has occurred at Hátzeg.

*31. Circus cineraceus (Mont.). *Réti Ülü* (Meadow-Harrier).

Very common in the Mezöség, where we found them nesting among reeds, the nest being sometimes considerably above the ground. We also met with them at Szent Mihály; and they are common near Klausenburg, but not so abundant in the lower parts of the country.

*32. Aluco flammeus (L.). *Gyöngy Bagoly* (Pearl-Owl).

Seems to have been formerly very common throughout the country, but is now becoming much scarcer. We obtained one near Bogát, on the Maros. That, and all the stuffed specimens which we saw, varied from our British type considerably, and were much darker in plumage. Herr Ottó says it has established itself among the rushes at the lake of Katona. It is common about Hermannstadt.

*33. Ulula uralensis (Pall.). *Hajnali Bagoly* (Dawn-Owl).

Not rare, appearing, however, to be much more abundant in some years than in others,—Herr Buda says, every third year. Bieltz writes that it is not rare near Hermannstadt and in the woods lying to the south of that town, the egg being smaller than that of the Eagle Owl, as round, but with a much more tender shell. We have not found this statement of its breeding in the country confirmed by any other authority. Danford saw this bird on two occasions near Demsus, in the Hátzeg valley, in October, and it is often to be met with among the alder bushes on the Strell and Klopotiva.

*34. Strix aluco, L.

Generally distributed and common, especially during winter.

35. Surnia funerea (L).

Very rare, but has occurred in the valley of the Strell, where Herr Buda Elek shot five one day. They were also found by Herr Petényi in the high pine-woods; and the species is included in a list of Transylvanian birds in Graf Lázár's collection.

36. Carine noctua (Scopoli). *Halál Bagoly* (Death-Owl).

Not uncommon, and generally distributed. We heard the cry of this bird at Záh, and saw the head and wings in a keeper's house at Szent Mihály. A superstition holds amongst the peasants that when this bird cries some one is dying; hence its native name.

37. Glaucidium passerinum (L.).

Not uncommon, but rarer than the preceding. Hermannstadt, Schässburg, Maroș Némethyi, are given by Bieltz as localities. Herr Buda Ádám says that he has killed them among the pines on the Retjezát, where they are pretty numerous. He also says their cry resembles that of the Hazel-Hen. They were found at Borbátviz and at Zajkány, on the Retjezát, by HH. Csáto and Buda Ádám.

38. Nyctea scandiaca (L.).

We were informed that a specimen of this bird was caught alive at Gyalu, near Klausenberg, and kept for some years in captivity. We can find no other record of its occurrence.

*39. Bubo ignavus, Forst. *Nagy füles Bagoly* (Great-eared Owl); *Huhogo.*

Generally distributed and common, especially in autumn; but during the spring we only met with them once.

*40. Asio otus (L.). *Erdei Bagoly* (Wood-Owl).

Generally distributed and not uncommon.

*41. Asio accipitrinus (Pall.). *Nadi bagoly* (Reed-Owl).

This species is very numerous in the fields and reedy ground near Hátzeg. It seems to be the commonest of the Owls, and remains in the country throughout the winter.

42. Scops giu (Scopoli). *Kis füles Bagoly* (Little-eared Owl).

Very rare. Bieltz mentions that there were two obtained in a vineyard at Nagy Enyed, one of which was taken alive. Two were killed by Herr Buda Ádám at Hátzeg in summer; and a specimen, shot at Györgyfalva, is in the Museum at Klausenburg.

*43. Jynx torquilla, L. *Nyak tekeres* (Neck-twister).

Common in gardens, orchards, and low-lying woods. We found them numerous at Görgény. They are migratory.

*44. Gecinus viridis (L.). *Zöld Harkály.*

Common everywhere among the lower oak- and beech-woods.

*45. Gecinus canus, Gm. *Szürke Harkály.*

Not so common as the preceding, and more local. We did not procure any during our present trip; but in autumn Danford found that they were not rare among the deciduous woods near Hátzeg, and shot several on the walls of the picturesque old Roman temple at Demsus. The skull of this Woodpecker seems to be smaller and narrower than in any of the others; and the skin may be easily drawn over.

*46. Dryocopus martius (L). *Fekete Harkály.*

Common in the higher woods, and descending to the beaches in autumn. We heard them near Upper Fanczal; and many were seen at Hátzeg and Bánffy Hunyad in August.

*47. Picus leuconotus, Bechst. *Fehér hátu Harkály.* Not uncommon. We shot one in the oak-woods at Görgény; but our finding it there in summer is considered singular. Like all the rest of this family, one sees many more of them in autumn, when they can always be found on the Klopotiva, near Hátzeg; and in winter, according to Herr Csáto, they often visit the orchards and willow trees on the Strell.

*48. Picus major, L. *Tarka Harkály.* Very common everywhere. We even met with it at Záh, in the Mezöség, a district scarcely suited to its mode of life. It is extraordinary with what tenacity Woodpeckers of this and other species cling, when wounded, to the bark of trees, or hang suspended from the topmost twigs. They often troubled us, too, by getting entangled in the dense bunches of mistletoe which grow at the very tops of the great oak trees in the Mocsár wood at Görgény.

*49. Picus medius, L. *Kösép tarka Harkály.* Common in the woods at Görgény and Hátzeg, and generally throughout the country.

*50. Picus minor, L. *Kis tarka Harkály.* Generally distributed, but not everywhere common. We saw it in the woods near Görgény; and it is common at Farkadin, near Hátzeg.

*51. Picoides tridactylus (L.). *Három újü Harkály.* Not uncommon among the high pine-woods. Danford saw them near the Retjezát in autumn. The specimens in the Museum at Klausenburg were shot at Jároviz, in the Hésdáti mountains. Herr Csáto says, in his paper on the natural history of the Retjezát, that this species never leaves the pine-woods.

*52. Cuculus canorus, L. *Kukuk.* Common in woods, plains, and mountains, and to be found even at the extreme limit of the wooded region, among the creeping pines.

*53. CORACIAS GARRULA, L. *Zöld Csoka* (Green Jackdaw); *Kalangya Varju.*

Not uncommon during its migrations. The only specimen we saw was in the Mezöség, near Tóhát. Flocks of this species visit the Strell valley in spring; and Herr Ottó (Zoological Communications) informs us that unusual numbers appeared at Klausenburg in June 1864.

54. MEROPS APIASTER, L. *Piripio; Gyurgyálag.*

Local, but, where occurring, found in considerable numbers. Herr Klir saw many during former visits at Bogát, on the Maros, where they were breeding in the river-banks. They seem, however, to be of a wandering disposition; for although we looked for them at this breeding-place on two occasions, we did not see a single bird, but were always told that they had been there a day or two before. The old nesting-holes which we examined in the low earth-banks of the river, were in some instances completely lined with elytra of beetles.

Herr Csáto says that in 1850 a great flock appeared at Nagy-oklos, in the Strell valley; and by Bieltz and others Kleinschelken, Birthälen, Nagy-Enyed, Szásváros, &c. are given as localities.

*55. ALCEDO ISPIDA, L. *Jég madár* (Ice-bird).

Generally distributed, and common at Hátzeg in autumn. In summer it frequents the streams among the lower hills. According to Herr Ottó it seldom appears in the Mezöség.

*56. UPUPA EPOPS, L. *Büdös Banka* (Stinking Hoopoe).

Generally distributed and common, especially among old woods where there is a good deal of turf and grass. We found many of them in the Mocsár (swamp) wood at Görgény, where they were breeding in deserted Woodpeckers' holes.

*57. CAPRIMULGUS EUROPÆUS, L.; *Lappantyú; Kecskfejö.*

Common. We saw many among the woods at Görgény.

*58. CYPSELUS APUS (L.). *Torony Fecske* (Tower-Swallow). Common. According to Bieltz they used to breed in old walls and towers, but do so no longer, but frequent the oak-woods, where they nest in the holes of trees. We found them in the Mocsár wood, and on the castle-hill at Görgény.

59. CYPSELUS MELBA (L.). *Havasi Fecske* (Mountain-Swallow).

Rare, but occurring among the higher mountains, where they nest among the rocks. Herr Buda Ádám has seen it near Hátzeg; and it has been seen in the Kolos wood near Klausenburg.

*60. CHELIDON URBICA (L.). *Fehér Fecske* (White Swallow). Common everywhere. Herr Ottó, however, writing in 1867, says that the Hirundinidæ are diminishing in numbers yearly so fast in Klausenburg that it is to be feared they will altogether disappear, and that "at present scarcely twenty to thirty pairs breed in the town."

*61. HIRUNDO RUSTICA, L. *Füsti Fecske* (Smoky Swallow). Common everywhere.

*62. HIRUNDO RIPARIA, L. *Marti Fecske* (Bank-Swallow). Common everywhere in the neighbourhood of water.

*63. MUSCICAPA COLLARIS, Bechst. *Légy Kapó.*

Said to be common, especially in lowland woods. We saw them, however, but rarely, in the beech-woods on the Hátzeg mountains, and in the Mocsár oak-forest at Görgény.

64. MUSCICAPA ATRICAPILLA, L.

Rarer than the preceding, but occurs among lowland woods.

*65. MUSCICAPA PARVA, Bechst.

Herr Klir, when with us, observed one near Záh; and it is not uncommon during autumn in some parts of the country, especially on the south-west frontier. Danford saw them at that season on the banks of the Klopotiva, near Réa, among thick bushes; and some specimens in Herr Buda Ádám's collection are from the same locality.

*66. Muscicapa grisola, L.

Common in gardens and the outskirts of woods.

*67. Lanius excubitor, L. *Bába Szarka* (Witch Magpie).

Common throughout the low country, but not abundant. It frequents the edges of woods, and perches high. It may also be seen sitting on the tall reeds of the lakes near Záh. This is the only species of the family which is not altogether migratory.

*68. Lanius minor, Gm. *Szarka Kergetö* (Magpie-hunter).

Very common in the lowlands; but, although we procured a good series of males, we did not obtain a single female. They principally frequent the outskirts of woods, gardens, and bushy ground.

*69. Lanius collurio, L. *Tövis szuró gébics* (Thorn-sticking Shrike).

Still commoner in the lowlands than the preceding. This and all the other species of Shrikes rarely occur in the mountain districts. We saw one specimen as high up the Görgény valley as Fanczal. Fifteen miles lower down, at Görgény Szent Imri, they were abundant.

70. Ampelis garrulus, L. *Selyem Fark* (Silk-tail); *Csontos szárny* (Bony-wing).

Not uncommon in winter, especially if the weather be severe. Danford has had specimens sent to him from Bánffy Hunyad; and Hátzeg, Ganczága, &c. are given as localities.

*71. Regulus cristatus, Koch.

Common among the pines, and in winter among the lower woods and gardens.

72. Regulus ignicapillus (C. L. Brehm).

Occurs in similar localities, but is rarer than the preceding. A specimen in the Museum at Klausenburg was shot in the gardens attached to the building.

*73. Panurus biarmicus (L). *Bajuszos Czinke* (Moustached Tit).

Common among the lakes of the Mezöség, especially at Záh, where, on still sunny days, we saw many of them at the edges of the reed-beds.

*74. Ægithalus pendulinus (L.). *Függö Czinke.*

Rare. Herr Klir, when with us, saw three at a lake near Záh, in the Mezöség. Bieltz says that he received a nest and eggs which were taken on the Maros river, near Karlsburg, and that it has also been found on the lakes at Tövis. Herr Ottó remarks that this species only came once (1872) to the Mezöség, and then disappeared quickly.

*75. Acredula caudata (L.). *Öszi apó* (Little Grey Father).

Common everywhere among the leafy woods. All the long-tailed Tits that we obtained were of this species, having white heads and pale yellow eyelids; the latter are conspicuous even in the newly flown young†.

*76. Parus cæruleus, L. *Kék Czinke.*

Common everywhere.

*77. Parus major, L. *Szén Czinke* (Coal Tit).

Common everywhere.

*78. Parus ater, L. *Fenyö Czinke* (Pine Tit).

Common among the mountain pine-woods. We found them on the Fanczal hills, and once saw a pair in a little wood near Tóhát.

*79. Parus palustris, L. *Moczári Czinke.*

Common everywhere, but most numerous in the pine-woods.

*80. Parus lugubris, Natt. *Gyász Czinke.*

Not uncommon. In the early part of the year it frequents mountain localities, living among rocks and brushwood, but descends in the autumn to the low country, where it generally haunts the plum-orchards. Danford saw it in October at Hátzeg.

---

† We believe that this character, so completely distinguishing the present bird *at all ages* from the British form (*A. rosea*, Blyth), in which the eyelids are red, was first noticed by Messrs. Alston and Harvie Brown in Norway (*cf.* Dresser, 'Birds of Europe,' pt. 14).

*81. Parus cristatus, L. *Búbós Czinke.*

Common among the pines. We found it on the mountains at Fanczal. Herr Csáto says, in his paper on the birds of the Retjezát, that this species never leaves the pine-woods.

*82. Sitta cæsia, Meyer. *Kapás* (The Hacker).

Common in all deciduous woods.

*83. Tichodroma muraria (L.). *Kö Mászó; Kövi Harkály* (Rock-Woodpecker).

Local, but not rare. Danford saw one specimen in September in the rocky chamois district near Hátzeg. Vajda-Hunyad, Ponorics, Nagy-Enyed, Alvincz, Cronstadt, and Talmatch, near Hermannstadt, are mentioned as localities.

*84. Certhia familiaris, L. *Fakusz.*

Said to be common, but did not seem so to us, as we saw only one during our recent visit, and, while for three months in the autumn at Hátzeg, Danford observed none. In Herr Buda Ádám's collection is a variety which he considers to be *C. brachydactyla.*

*85. Troglodytes parvulus (Koch). *Ökör szém* (Ox-eye).

Common everywhere, but apparently more abundant in the mountain-valleys.

*86. Cinclus aquaticus, Bechst. *Vízi Rigo* (Water-Thrush).

Common on all mountain-streams. Specimens obtained by us were evidently of the variety *C. albicollis,* Vieillot.

*87. Turdus merula, L. *Fekete Rigo.*

Common everywhere. It remains throughout the winter.

*88. Turdus torquatus, L. *Örves Rigo.*

Common. It breeds among the mountain-woods, but migrates in autumn. We saw a number on the Fanczal mountains, at the upper limit of the pine-woods, which in that district is at an elevation of about 4000 feet.

*89. Turdus viscivorus, L. *Lép Rigo.*

Common everywhere, and to some extent migratory. Herr

Buda Ádám says that it nests among the pines, and he has never found them breeding in the low country. We saw them in the oak-woods at Sztána, near Klausenburg, on the 10th June.

*90. Turdus pilaris, L. *Fenyö Rigo* (Pine-Thrush).

Most of the authorities whom we have been able to consult agree in saying that this bird remains the whole year, or, at all events, that some of them breed in the country. Herr v. Pelzeln informs us that it is very likely to be found breeding in Transylvania, as it has done so regularly for the last three years in Moravia. The breeding-range of this species appears to be extending in a southerly direction. Herr Buda Ádám is quite certain that it nests, and says that he has seen them in companies during the summer months among the pine-woods. He is quite sure it was no other bird.

*91. Turdus iliacus (L.). *Veres Rigo* (Red Thrush).

Rather rare, and only to be found in autumn and winter. Danford saw both this and the preceding species at Hátzeg.

*92. Turdus musicus, L. *Eneklö Rigo ; Szürke Rigo* (Grey Thrush).

Common everywhere, especially among vineyards in autumn. It does not winter in the country.

*93. Monticola cyanus (L.). *Kék Rigo* (Blue Thrush).

Very rare. Bieltz says it was obtained by Herr Stetter at Offenbánya; and it has also been met with among the ravines near Cronstadt.

*94. Monticola saxatilis (L.). *Kövi Rigo.*

Not uncommon in most rocky mountain districts, and in summer to be found on the highest peaks. We came across them in the plain near Klopotiva, at the base of the Hátzeg mountains. This was in April, and they had evidently just arrived. Herr W. Hausmann, writing of this species, says:—“They often nest in the hollows of limestone rocks, the nest being composed of dried grasses, feathers, and wool, somewhat carelessly made, and containing four to six eggs. They come generally in the end of April or beginning of May. There seem to be more cocks than hens.”

*95. Ruticilla phœnicurus, L. *Füsti jark* (Smoky tail). Tolerably common everywhere.

*96. Ruticilla titys (Scop.). Black Redstart. *Fekete begy.* Not uncommon in most rocky neighbourhoods. We saw them in the Klopotiva gorge, near Hátzeg. Herr Csáto says they breed at Ponorics, in the Strell valley; and they ascend the Retjezat to the region of the creeping pine. HH. Csáto and Buda Ádám observed them at an altitude of 5500–7000 feet.

*97. Cyanecula wolfi, C. L. Brehm. *Kék begy.* Rare, but occurs occasionally near water. We only met with them once, on the banks of the lake at Záh. They also occur in the valley of the Strell. The specimens in the Museum at Klausenburg are from Záh.

Obs. Bieltz alludes to the blue unspotted variety, a specimen of which was shot by Herr Stetter at Batiz, on the Strell; and Mr. Dresser informs us (*in epist.*) that the true *C. suecica* of Linnæus is almost certain to occur during migration.

*98. Erithacus rubecula (L.). Robin. *Verés begy.* Said to be common; but we only saw a single bird, at Görgény. It is migratory, arriving with the spring flight of Woodcocks, and departing with them in autumn. Some few, however, remain until the first fall of snow.

*99. Daulias luscinia (L.). *Fülemile; Csalogány.* Common throughout the country in the leafy woods, coming in April and leaving in September.

100. Daulias philomela (Bechst.). *Dalabáj.* Said to be as common as the preceding, and to frequent more the neighbourhood of water. We probably saw it at Görgény.

*101. Saxicola œnanthe (L.). *Szikla madár* (Rock-bird). Common everywhere.

*102. Pratincola rubicola (L.). Common everywhere.

*103. Pratincola rubetra (L.). Common everywhere.

*104. Accentor collaris (Scop.). *Havasi Csalogány* (Mountain-Nightingale).

Not uncommon among the hills, among loose stones and grassy slopes. Danford met with them in September, at an elevation of about 6000 feet, in the mountains near Hátzeg. They often descend to the low country, and, according to Bieltz, were to be found every year in companies of twenty to thirty on the castle-hill at Déva, from the end of December up to the middle of January.

*105. Accentor modularis (L.). *Bájdalú zenér.*

Common, according to some authorities, while others say it is only to be met with in the mountain-woods, and that but rarely. Herr Csáto says it is to be found in the valley of the Strell at the end of autumn and the beginning of May. It ascends to an elevation of 5500 to 7000 feet, where it has been found by HH. Csáto and Buda Ádám on the Retjezát. We saw none during our visit; but Danford has since met with it among gardens near Hátzeg, during October of the present year.

*106. Sylvia nisoria (Bechst). *Kukuk Fülemile* (Cuckoo Nightingale.)

Well distributed and not rare. We met with it at Záh and Görgény, both in the old woods and among small bushes, but only procured specimens of immature birds. It also occurs in the Strell valley, nesting at Russ.

107. Sylvia salicaria (L.). *Fattyu Fülemile* (Bastard Nightingale).

Not uncommon in gardens and bushy ground, and observed on the Retjezát by HH. Csáto and Buda Ádám.

*108. Sylvia atricapilla (L.). *Fekete fejü zenér.*

Common in woods near hills. We found them at Görgény, and procured a specimen in the wood near Záh. It was also observed on the Retjezát by HH. Csáto and Buda Ádám.

*109. Sylvia curruca (L.).

Very abundant.

110. SYLVIA RUFA (Bodd.).

The Common Whitethroat is common, but not so abundant as the last.

111. PHYLLOSCOPUS SIBILATRIX (Bechst.).

Common among the woods of the plains and low country, and also observed on the Retjezát by HH. Csáto and Buda Ádám.

*112. PHYLLOSCOPUS TROCHILUS (L.).

Not uncommon among woods and gardens and the willow trees in meadows. Seen on the Retjezát by HH. Csáto and Buda Ádám.

113. PHYLLOSCOPUS BONELLII (Vieill.).

There is a specimen in the Klausenburg Museum, which was shot in the museum-garden in May 1873. It was also killed by Herr Stetter at Batiz, on the Strell, in March 1845.

*114. PHYLLOSCOPUS COLLYBITA (Vieill.). Chiff-Chaff. *Arany fark* (Gold-tail).

Common everywhere.

115. HYPOLAIS ICTERINA (Vieill.).

Not common. It occurs among orchards and leafy hill-woods at Hermannstadt and Schässburg. Herr Csáto has met with it on the banks of the Strell; and some specimens at Klausenburg were shot in the museum-garden.

*116. ACROCEPHALUS SCHŒNOBÆNUS (L.).

Very common everywhere.

117. ACROCEPHALUS AQUATICUS (Gm.).

Very rare. A specimen shot by Herr Buda Ádám at Réa, near Hátzeg, is in his collection, labelled *S. cariceti.*

118. ACROCEPHALUS NÆVIA (Bodd.). *Prücsök zenér.*

Not rare by bushy river-banks, and, according to Bieltz, still oftener to be found among damp leafy woods. Herr Csáto says they breed in the bushy meadows between Baczalár and Strell Szent György.

119. ACROCEPHALUS LUSCINIOIDES (Savi).

Herr Buda Ádám says of this bird, that in 1863 there were many of them nesting among the reeds and willows near Hátzeg, but since that time he has seen none. Herr Csáto mentions that, in May and June of the same year, Herr Buda and himself shot some specimens in the Kriseny marsh, and further says:—"It is not shy, and sits on the top leaves of reeds, uttering its grating note [schwirrenden Ton] from early morn till night." He has happened to hear *A. luscinioides, A. locustella* (*rayi*, Penn.), and *A. fluviatilis* all together, and makes the following distinctions:—

A. luscinioides. Buzzing note weaker, one-toned, and shorter than *fluviatilis.* Sits on the upper leaves and dry tops, and is only found in marshes.

A. fluviatilis. Buzzing note double-toned, loudest, and longest. Sits on branches of alders, near the trunk, and on bushes and ferns.

A. locustella. Buzzing note weakest. Sits on the top twigs of willows.

*120. ACROCEPHALUS FLUVIATILIS (Wolf).

Not uncommon among the reedy lakes of the Mezöség and other localities, but, from their mouse-like habit of running and creeping at the bottom of the reed-stems, are rather difficult to obtain. We found them at Tóbát and Záh.

121. ACROCEPHALUS PALUSTRIS (Bechst.).

Common in marshy and willowy ground. Herr Csáto says it nests in the hemp- and rye-fields in the Strell valley.

*122. ACROCEPHALUS STREPERUS (Vieill.).

Common in marshes and by river-banks.

*123. ACROCEPHALUS ARUNDINACEUS (L.). *Nádi Veréb* (Reed-Sparrow).

Very common in the Mezöség, their harsh grating cry resounding from among the reed-beds in every direction.

*124. MOTACILLA ALBA, L. White Wagtail.

Common everywhere.

*125. MOTACILLA SULPHUREA, Bechst. Grey Wagtail. *Havasi Billegény* (Mountain-Wagtail).

Rare in the low country, but getting commoner as one approaches the mountains. Only one specimen seems to have been observed in the Mezöség, at Gyéké, by Herr Ottó.

126. Motacilla citreola (Pall.).

Bieltz says that this bird was got by Herr Stetter at Szamos-falva, near Klausenburg, and is probably to be found in most of the salt-districts.

*127. Motacilla flava, L. *Leányka madár* (Girl-bird).

Very common in the low countries, especially in the Mezöség.

Obs. Herr Ottó says two varieties are found in the Mezöség, and from his description the other would appear to be *Budytes cinereocapilla.*

*128. Anthus spipoletta (L.). *Vizi Pipiske.*

Common. It remains during the greater part of its stay in the country, among the high grassy mountain-slopes. We found it on the Fanczal Berg at an elevation of 4000 feet; and Danford saw them on the Hátzeg mountains as high up as 7000 feet, while later in the autumn they were not uncommon on the banks of the Klopotiva, near Hátzeg. They also occur in the Mezöség, near Gyéké.

*129. Anthus trivialis (L.). *Fái Pipiske.*

Common throughout the country, but does not remain over the winter.

*130. Anthus pratensis (L.). *Réti Pipiske.*

It does not seem to be so common as the Tree-Pipit, and is also migratory, coming during spring in flocks, and leaving in October. It breeds in the marshes at Krisény, in the Strell valley.

131. Anthus cervinus (Pall.).

Rare. There are two specimens in full breeding-plumage in the Klausenburg Museum, which were shot in April 1867 at Gyéké, in the Mezöség, by Herr Klir; and Herr Ottó makes mention of its occurring on migration (A Mezöség I. &c. 1869), and remaining a considerable time (A Mezöség II. &c.).

132. ANTHUS CAMPESTRIS (L.). *Mezei Pipiske* (Field-Pipit). Not uncommon on fallow lands and dry elevations on the plains. Herr Csáto says they are to be found on the banks of the Strell in autumn.

133. ANTHUS RICARDI, Vieill.
Very rare. A specimen at Klausenburg was shot in the museum-garden in September 1871.

Obs. Stetter mentions *A. littoralis* as occurring; but it is undoubtedly *A. spipoletta* that is meant.

*134. ALAUDA ARVENSIS, L. *Mezei Pacsirta* (Field-Lark). The birds of this species which we saw (and they were not many) appeared to frequent the higher parts of the Mezöség, leaving the lower ground almost entirely to the crested species, with which they are said to be equally common; not, however, in winter, as they arrive in March and leave in October.

*135. ALAUDA ARBOREA, L. *Erdei Pacsirta.*
Not very common, and also migratory. It arrives in March. We saw them at Görgény on the borders of the Mocsár wood. They were found also on the Retjezát by HH. Csáto and Buda Adám.

*136. ALAUDA CRISTATA (L.). *Bubós Pacsirta.*
Very common everywhere.

137. MELANOCORYPHA CALANDRA (L.).
Bieltz says of this bird that it is more uncommon than one would expect, as it is not rare in the adjoining countries of Wallachia and Galicia. According to Herr Buda it is of very rare occurrence. It has been procured at Koncza by Herr Csáto (auct. Graf Lázár).

138. MELANOCORYPHA SIBIRICA (Gm.).
Very rare. The first specimen known to have occurred in the country was shot by Herr Buda Carl in a clay-hole at Koncza on December 24th, 1855.

139. OTOCORYS ALPESTRIS (L.).
Of very rare occurrence, and only seen in hard winters. In 1856 they appeared in considerable numbers, and a good

many were obtained at Ganczaga, on the Strell, by Herr Buda Elek.

*140. EMBERIZA MILIARIA, L. *Surdé.*
Very common everywhere.

*141. EMBERIZA CITRINELLA, L. *Sármántyu.*
Common everywhere.

142. EMBERIZA CIRLUS, L.
This species has been obtained at Koncza by Herr Csáto (auct. Graf Lázár).

*143. EMBERIZA CIA (L.).
Local. Breeds in the mountains, and comes down to the low country in autumn. We found a few in April among the rocks and bushes in the Klopotiva gorge, near Hátzeg. Herr Csáto says they breed in the bushy ground about the ruins of the castle at Orlya.

*144. EMBERIZA SCHŒNICLUS, L. *Nádi Veréb.*
Common in all marshy districts.

145. EMBERIZA PYRRHULOIDES (Pall.).
We saw two specimens in Herr Buda Ádám's collection, which he had got in spring time at Koncza, near Mühlbach. He says they are very rare.

146. PLECTROPHANES NIVALIS (L.).
Herr Buda says that he has seen them occasionally at Hátzeg; and according to Bieltz they have been found at Topánfalva.

*147. PASSER MONTANUS (L.). *Mezei Veréb* (Field-Sparrow).
Common everywhere.

*148. PASSER DOMESTICUS (L.). *Házi Veréb* (House-Sparrow).
Common everywhere.

Obs. Bieltz says that he thinks it probable that *P. petronia* (L.) also occurs, as it has been found in the Gallician Carpathians.

[To be continued.]

XXII.—*On the Nidification of certain South-Indian Birds.*

By Rhodes W. Morgan.

1. Hirundo domicola, Jerdon.

Breeds in the Neilgherries in the roofs of houses and verandas, also on large rocks and cliffs. In shape the nest resembles a pocket or the half of a teacup. It is formed of small clay pellets agglutinated together with the saliva of the bird, and is very firmly cemented to the face of the rock. The lining consists of feathers. The eggs are generally two in number, minutely speckled with claret-coloured spots on a whitish ground, the spots being gathered together in a zone at the larger end. Average length ·77 inch, breadth ·5.

2. Collocalia francica (Gm.).

Breeds from March to May. I know of the existence of three breeding-places on the Neilgherries. One is well known to the residents under the name of the "Tiger's Den." It is situated on the road from Ootacamund to Coonoor, and is about three miles distance from the former place. The other two were discovered by myself near the Pykarah waterfalls; one, in a cliff between two huge boulders of rock, is of considerable size, and branches off into two passages. After penetrating for about twenty feet, you come to two passages at right angles to one another; the main passage descends abruptly for about twelve feet. I managed to get down this by the aid of ropes, and found myself knee-deep in excrement; and almost at the same moment a perfect shower of filth descended on my head from above. The nests were situated at the extreme end of the passage, on the face of the rock. They were constructed entirely of inspissated saliva mixed with moss, lichen, and a few feathers. In shape they were precisely similar to the nests sold in the Chinese markets. Each nest contained two eggs, which were of a pure white, and much elongated. The measurement of an egg in my collection is as follows—length ·85 inch, diameter across ·54.

3. Caprimulgus indicus, Latham.

This Nightjar breeds in all the forests and thick brushwood jungles of Southern India. Its monotonous note may be heard the livelong night in the breeding-season, which is in March. The eggs are generally two in number, and are placed in a slight depression in the ground under some low bush. The egg is rather a pretty one, being thickly blotched with faint lilac and reddish brown on a salmon-coloured ground. Length ·98 inch, breadth ·58.

4. Caprimulgus kelaarti, Blyth.

Like the preceding species, this breeds in March. The eggs are lighter in colour, being of a pinkish buff, blotched with pale violet-brown. On one occasion I found the eggs laid on a heap of ashes. The dimensions of one in my collection are 1·11 inch in length by ·82 in diameter across.

5. Merops viridis, Linnæus.

Breeds in river-banks in large numbers. There are large colonies of Bee-eaters that breed annually on the banks of the Kistna and Canary rivers. These colonies consist of *M. viridis*, *M. quinticolor*, and *M. philippensis*. The two former breed largely also on the Coonoor and Segoor Ghauts of the Neilgherries. The small green Bee-eater generally lays five eggs, which are very nearly round, and, like the eggs of the rest of the family, of a pure and glossy white. The average size is ·74 inch in length by ·65 in breadth. Breeds in April.

6. Coracias indica, Linnæus.

The Indian Roller breeds in March in holes of trees. The tamarind and banyan are generally chosen for this purpose. The eggs are usually two in number, and of a pure and glossy white. There is no nest. In size the eggs average 1·39 inch in length by 1·13 in breadth.

7. Megalæma caniceps (Franklin).

This Barbet breeds in the Neilgherries in March. It excavates a chamber in a decayed branch of a tree, and deposits three beautiful white eggs on the chips at the bottom. Almost immediately after the young have flown it lays a second batch of eggs, generally in the same hole—but if that has been destroyed, in a fresh one, which it excavates in the same or a neighbouring branch. In size the egg is 1·12 inch in length by ·9 in breadth.

8. Megalæma viridis (Gmelin).

Lays three glossy white and rather elongated oval eggs in a tunnel excavated by itself in a decayed branch. In size the egg is 1 inch in length by ·58 in breadth.

9. Coccystes jacobinus (Bodd.).

Deposits a single egg of a very brilliant greenish blue, the greenish tinge predominating, in the nest of *Malacocercus griseus*. Both extremities of the egg are alike in shape. Lays from March to May. Before dropping its own egg it always ejects one of the eggs of the rightful owner. Dimensions of an egg 1·81 inch in length by ·81 in breadth.

10. Centropus rufipennis, Illiger.

Breeds in dense thorny bushes, building a domed nest with an aperture in the side. The nest is composed of green leaves and twigs carelessly woven together. The eggs are from two to three in number, and of a dull white. They are covered with a chalky epidermis, which, when removed, leaves the shell of a pure white, and not of a beautiful blue as in the case of *Crotophaga ani*. The dimensions of an egg in my collection are 1·5 inch in length by 1·21 in breadth.

11. Nectarophila zeylonica (Linnæus).

This little Sun-bird breeds all over the plains of Southern India. The bird often selects a cobweb in which to build its nest; and this is so ingeniously built that it is impossible to detect the existence of the nest unless the cobweb is examined. The eggs are two in number, and of a pale greenish white, minutely speckled with dusky grey. Dimensions: ·62 inch in length by ·46 in breadth.

12. Arachnechthra asiatica (Latham).

The purple Honey-sucker builds a nest very similar to the preceding. It breeds both on the plains and in the hills, ascending the Neilgheries to an elevation of 6000 feet. The nest is composed of small twigs, pieces of grass and leaves, and is lined with the down of thistles and silk-cotton. It is generally adorned with the excrement of caterpillars, small bits of rag, paper, &c. A pair that built in front of my office at Kurnool, in an acacia-tree, had the most extraordinary nest I have ever seen. It was ornamented with bits of blotting-paper, twine, and old service-stamps that had been left lying about. The whole structure was most compactly bound together with cobwebs, and had a long string of caterpillar-excrement wound round it. This excrement had most probably fallen on a cobweb and had stuck to it, and the cobweb had afterwards been transported in strips to the nest. It breeds from February to June, the majority of the nests being constructed in March and April. The eggs are thickly spotted with dusky brown on a greenish grey ground, the usual number being three. Dimensions of an egg in my collection ·65 inch in length by ·46 in breadth.

13. DICÆUM CONCOLOR, Jerdon.

This little bird breeds in March, building a beautiful little pendulous nest at the extreme end of a small twig, some twenty or thirty feet from the ground. The tree usually chosen in the cantonment at Ootacamund, on the Neilgherries, is the *Acacia melanoxylon*. The nest is built of the silky down of some tree, and bound together with very fine fibres. The entrance is at the side. The eggs are beautifully white and fragile-looking, usually two in number. Measurements of one in my collection are as follows—·7 inch in length by ·45 in breadth. Owing to the great height at which these birds build, large numbers of their nests are torn off and blown down if the weather becomes at all windy.

14. DENDROPHILA FRONTALIS (Horsfield).

Breeds in holes of trees, preferring the deserted ones excavated by *Megalæma caniceps*. The nest is built of moss, and lined with the fluff of hares and soft feathers. The eggs are always four in number, spotted with pinkish red on a white ground, the spots being more numerous towards the larger end. They breed in March. Dimensions: ·71 inch long by ·57 broad.

15. UPUPA NIGRIPENNIS, Gould.

Breeds in holes of trees in April. The eggs are of a dull light olive, rather elongated in shape, and from three to six in number. There is never any nest; and the hole in which the eggs are deposited has often a most intolerable stench about it. Dimensions of an egg 1 inch in length by ·7 in breadth.

16. Buchanga atra (Herm.)*.

Breeds from March to the end of May, constructing a slight cup-shaped nest in a tree. The nest is composed of fine twigs bound together with cobwebs, and is rather a flimsy concern, the eggs often being visible from below. It is generally placed in the fork of a branch, at from ten to thirty feet from the ground. The eggs are three in number, occasionally only two, and vary very greatly in colour, some being almost of a pure white, whilst others again are spotted and blotched, especially at the larger end, with claret and light purple on a rich salmon-coloured ground. The birds are very noisy in the breeding-season, keeping all intruders off, not hesitating to attack Kites and Crows. They seem to have an especial antipathy to the latter. The dimensions of an egg are 1·07 inch in length by ·99 in breadth.

17. Leucocerca pectoralis (Jerdon).

The nest of this lively little bird is very difficult to find. The first I ever discovered had been within a couple of feet of my head for more than an hour; and it was only when my dog-boy attracted my attention by pulling it down, and saying, "What a very odd-looking nest this is," that I saw it. It contained three eggs of a light hair-brown colour, with a ring of darker spots of the same colour at the larger end. It was shaped like a funnel, and was constructed entirely of fibrous grasses bound together with cobwebs, and was lined with very fine grass stems. The eggs averaged ·6 in length by ·5 in breadth. The nest is usually placed very low down, some two or three feet from the ground; and when discovered the bird flies out and flutters feebly along the ground in front of you, trying to allure you away.

18. Empidothera cinereocapilla (Vieillot).

This Flycatcher breeds in March and April, building a nest of fine moss, which is attached like a pocket to the mossy trunk of some large shola-tree. The nest is almost invariably built under a branch or some other projection to shelter it from the rain, and is very securely attached with cobwebs to prevent it from being blown down. The eggs are almost always three in number, of a very faint greenish-grey colour, with a wide zone of the same (but darker) colour at the larger end. Dimensions of one, ·62 inch in length by ·51 in breadth. I have never found its nest on the plains.

---

* [*Muscicapa atra*, Hermann, Obs. Zool. p. 208 (1804)].

19. OCHROMELA NIGRORUFA (Jerdon).

This very beautiful little Flycatcher breeds in ravines where the shade and cover is very dense. The nest is built entirely of bamboo-leaves, and is lined with fine fibres. It is placed very low down, from six inches to two feet from the ground; a clump of fern is a very favourite situation. The eggs are two in number, and are very minutely and thickly speckled with faint reddish-brown on a pale olive ground, the whole of the upper part having a regular cap of reddish brown. Dimensions of one, ·74 inch in length by ·54 in breadth.

20. EUMYIAS ALBICAUDATA (Jerdon).

Breeds in holes of trees from February to May. The nest is constructed of moss, and is lined with fine fibres. The eggs are from two to three in number, being almost entirely covered with numerous pale rusty-red spots running into one another, sometimes forming a zone at the larger end, at others so completely covering the egg as to give it the appearance of being entirely of a reddish pink, the colour being always darker towards the larger end. Dimensions of an egg ·85 inch by ·54.

21. ERYTHROSTERNA MACULATA (Tickell).

Builds a small, shallow, round nest, open at the top, in small trees, at from twelve to twenty feet from the ground. The eggs are three in number, spotted, and blotched with brownish black, the spots forming a zone at the larger end. The nest is a very pretty one, being covered all over with small pieces of lichen, which give it a greyish appearance. Although the walls are very thin, they are very strong, being compactly bound with cobwebs. The bird, when seated on its nest, is scarcely visible. The bird itself is by no means a common one; and I have found but one nest, on the Seeghoor Ghaut of the Neilgherries. Mr. Davison found another, prior to the one I discovered, on an apple-tree in Ootacamund. I am indebted to him for the only egg I possess, and the dimensions of which are as follows—length ·65 inch, by ·51 in breadth.

22. MYIOPHONUS HORSFIELDI, Vigors.

I found the nest of this Thrush on the Seeghoor Ghaut of the Neilgherries. Mr. Davison was with me at the time; and the nest being built on an open ledge of rock, we both sighted it at the same moment; and I, having managed to make better use of my legs than my friend, was fortunate enough to secure it, and one egg, which was of a pale flesh-colour, with a few faint spots and blotches of claret towards the larger end. The nest was made of leaves and moss mixed with clay, and lined with fine roots. The dimensions of the egg are 1·3 inch in length and ·85 in breadth. It was in May that I found this egg; but the nest had evidently been deserted for some time; for the egg had a hole in its side, through which the contents had escaped or been sucked by a snake or some animal.

23. GEOCICHLA CYANOTUS (Jard. & Selb.).

Breeds in the forests of the western coast in August and September, building in small trees. The nest is composed of grass, leaves, twigs, &c., with the usual clay foundation which is found in almost all Thrush's nests, and is lined with fine roots and hairs. The eggs are from three to four in number, of a pale greyish blue colour, thickly speckled with minute reddish brown spots. The average dimensions are ·95 inch in length by ·77 in breadth.

24. MERULA SIMILLIMA (Jerdon).

Breeds on the Neilgherries from March to May, building a large nest of moss, twigs, wool, &c., with a clay cup in it, which is neatly lined with bent-grass and roots. The eggs are three in number, irregularly blotched with reddish brown, the blotches being more numerous towards the larger end, on a pale greenish blue ground. This Blackbird sings most beautifully in the breeding-season; and they may then be heard at all hours, but especially towards evening, answering one another. Dimensions of an egg 1·26 inch in length by ·91 in breadth.

25. Oreocincla nilgiriensis, Blyth.

This handsome Thrush breeds from March to June on the Neilgherries, almost invariably on some low tree, some six or eight feet from the ground. The nest is very much like that of the preceding species, and usually contains three eggs, of a pale greenish blue colour, minutely speckled with rusty brown. They average in size 1·21 inch in length by ·82 inch in breadth. This Thrush may usually be seen seated on the topmost branch of some large shola-tree late in the evening. It utters every now and then a single clear warbling note, but appears to have no song.

26. Pomatorhinus horsfieldi, Sykes.

Breeds in April, constructing a neat domed nest of leaves on the ground at the foot of a bush. The nest is lined with fine grasses, and almost always contains three eggs, which, when fresh, are of a beautiful pink colour, owing to the yelk shining through the shell, which is exceedingly fragile. The egg, when blown, is of a very beautiful glossy white. If suddenly approached whilst on its nest, this bird runs out like a rat, and flies when at a distance from the nest. An egg in my collection measures 1·04 by ·7 inch.

27. Trochalopteron cachinnans (Sykes).

Builds a very neat nest of moss, dried leaves, and the outer husk of the fruit of the Brazil-cherry (a *Solanum*), lined with feathers, bits of fur, and other soft substances. The nest is cup-shaped, and generally contains three eggs, most peculiarly marked with blotches, streaks, and wavy lines of a dark claret-colour on a light-blue ground. The markings are almost always at the larger end. The Laughing Thrush is a very noisy bird, the female uttering a loud and harsh *ka, ka, ka,* to which the male responds *pee-a ka, ka, pee-e, a-ka, kaka*; the two birds seem to utter the cry alike. When the nest is first discovered the owners come hopping near, uttering a low croaking cry that sounds like *kore, kore, kore*. An egg in my possession measures ·98 inch in length by ·73 in breadth.

28. Hypsipetes neilgherriensis, Jerdon.

Breeds in lofty trees in the Neilgherries, building a shallow cup-shaped nest, from 20 to 60 feet from the ground. The nest is constructed of the dried stems of the wild "Forget-me-not," and lined with a moss much resembling black horse-hair. The eggs, which are two in number, are pretty thickly spotted with pale lilac and claret on a light pink ground-colour. I found these birds migrating in vast flights, numbering several thousands, in the Bolumputty valley in July. They were flying westwards towards Malabar. The dimensions of an egg are 1 inch by ·73.

29. Otocompsa jocosa (Linnæus).

Builds a nest similar to the preceding, but with thicker sides. The nest is generally built in some low dense bush, and contains from two to three eggs, very minutely and thickly spotted with pinkish claret on a pale pink ground, the spots being very close together. An egg measured ·97 inch in length by ·68 in breadth. Breeds from March to May.

30. Pratincola atrata, Blyth.

Breeds in holes of banks from February to May, laying three or four pale greenish-blue eggs, minutely speckled with reddish brown, the dots forming a very distinct zone at the larger end. The nest is constructed of moss, pieces of old rag, frayed bits of grass, &c., and is lined with feathers and the dried droppings of the wild cat (*Felis chaus*), which, being principally composed of rat's fur, are very soft; the nest in consequence is often rather odorous. An egg measured ·78 inch by ·6.

31. Prinia socialis, Sykes.

Builds in March, constructing a very neat pendent nest, which is artfully concealed, and supported by sewing one or two leaves round it. This is very neatly done with the fine silk which surrounds the eggs of a small brown spider. The nest is generally built of fine grass, and contains three eggs of a bright brick-colour with a high polish. The entrance to the nest is at the top, and a little on one side. An egg measured ·7 inch in length by ·48 in breadth.

32. Drymoipus inornatus (Sykes).

Builds a neat pendent nest in long grass on the Neilgherries. The nest is composed entirely of short pieces of grass felted together, and is very compact. The eggs are three in number, and are of a blue colour, with large blotches and hair-like streaks of a dark reddish brown at the upper end. An egg measured ·69 inch by ·5.

33. Zosterops palpebrosus (Temminck).

Builds a pretty little cup-shaped nest of golden-coloured moss and thistle-down, lined with silk-cotton. The nest is generally built low down. The eggs are two in number, rarely three, and are of an exceedingly pale blue; ·71 inch in length by ·51 in breadth.

34. Parus cinereus, Vieillot.

Breeds in March and April in holes of trees, laying from two to four eggs, which are white with a few pink spots at the larger end. The nest is composed entirely of soft fur. This little Tit may frequently be seen in the vicinity of stables, in the breeding-season, where it comes for the sake of the horse-hair which is thrown out after the horses are groomed in the morning. I have found many nests entirely composed of this substance, with a few stray bits of wild cat's dung. An egg I measured was ·7 inch in length by ·51 in breadth.

35. Acridotheres mahrattensis (Sykes).

Breeds on the Neilgherries in holes of trees. The hole is filled up with sticks to within about a foot of the entrance, and a smooth lining of paper, rags, feathers, &c. laid down, on which are deposited from two to six light-blue eggs. The young are fed on small frogs, grasshoppers, and fruit. An egg measured 1·2 inch by ·88. Breeds in May.

36. Estrelda amandava (Linnæus).

Breeds on the Neilgherries in August and September, building a large domed nest of grass, with the entrance in the side. Several females seem to lay in the same nest; for I have found as many as fourteen eggs in a nest, and have seen five birds fly out. The eggs are pure white, and average ·62 inch in length by ·45 in breadth.

37. Palumbus elphinstoni (Sykes).

Breeds in March and April in the dense woods of the Neilgherries, depositing its single glossy white egg on a loosely constructed platform of sticks some eight or ten feet from the ground. Dimensions of an egg 1·55 inch by 1·21.

38. Sypheotides auritus (Latham).

Breeds in April and May in low scrub-jungle. The eggs are laid under a bush, in a slight hollow; they are generally two in number, thickly blotched at the larger end with hair-brown, and more sparsely all over with slate-coloured and dark brown dots. One in my cabinet measures 1·99 inch in length by 1·3 in breadth.

39. Sarciophorus bilobus (Gmelin).

Breeds at the same time and in the same manner as the preceding. The eggs are from two to three in number; blotched and irregularly streaked with dark slate and umber-brown on a light buff ground. They average 1·5 inch in length by 1·01 in breadth.

40. Œdicnemus crepitans (Temminck).

I shot a female of this bird in Kurnool in May, and, on dissecting it, discovered a fully developed egg, which I find is different from the eggs of *Œ. crepitans* as found in Europe. I examined a fine series in Mr. Dresser's collection, and find that the egg in my possession is entirely different in coloration, being of a dirty white with a very few small yellowish-brown blotches. This egg appeared to be perfectly ready for exclusion. It measured 1·8 inch in length by 1·33 in breadth.

41. Gallinula phœnicurus (Forster).

Breeds in low bushes in October, laying four or five light-brown eggs, speckled with numerous small, round, black dots evenly distributed over the whole surface. An egg obtained in Mysore measures 2 inches in length by 1·39 in breadth.

XXIII.—*Contributions to a History of the* Accipitres. *The Genus* Strix *of Linnæus, and its Type.* By R. Bowdler Sharpe, F.L.S., F.Z.S., &c., of the Zoological Department, British Museum.

As Professor Newton and Mr. Salvin (*anteà*, p. 66) hold different views as to which species of Owl should be designated as the type of the Linnæan genus *Strix*, I must preface the following notes by expressing my sense of the difficulty of attempting a settlement of the question, especially as the former ornithologist has done such excellent work in his revision of the nomenclature of European birds in his new edition of 'Yarrell.'

Having, however, been lately forced to determine this question for myself, with regard to a redistribution of the genera of Owls for the second volume of my 'Catalogue of Birds,' I believe that a publication of the method by which I have assigned the types of the genera *Strix* and *Asio* may lead to a profitable discussion.

In 1766 Linnæus published his 12th edition of the 'Systema Naturæ,' the standard work whence most ornithologists commence their inquiries. In this book he characterized his genus *Strix*; of which he knew only twelve species, and these he divided into two sections:—

α. auriculatæ, pennis auricularum instar exstantium.

1. *bubo*, 2. *scandiaca*, 3. *asio*, 4. *otus*, 5. *scops*.

β. inauriculatæ.

6. *nyctea*, 7. *aluco*, 8. *flammea*, 9. *stridula*, 10. *ulula*, 11. *funerea*, 12. *passerina*.

It simplifies matters to remember that Nos. 2 and 6 refer to the same species, while No. 9 is identical with No. 7, and No. 11 with No. 10.

By Rule 2 of the British-Association code we are permitted to retain certain Brissonian genera, "which are *additional* to those in the 12th edition of Linnæus." We may therefore adopt Brisson's genus *Asio* (Orn. i. p. 28), in which he proposes to place the Horned Owls. It is pretty evident that this arrangement of Brisson's influenced Linnæus in his classification of the genus *Strix*; for his *Striges auriculatæ* answer to the genus *Asio*. Thus the suborder *Striges*, as determined by Linnæus and Brisson, is as follows:—

Genus Asio, Briss.

1. *Asio bubo* (L.); 2. *Asio scandiaca* (L.); 3. *Asio asio* (L.); 4. *Asio otus* (L.) (*Asio*, Briss.); 5. *Asio scops* (L.).

Genus Strix, Linn. (partim).

In this would come all the Owls mentioned above, viz. Nos. 6. to 12.

Beyond the publication of numerous other species by Scopoli, Latham, Gmelin, and others, no additions to the generic nomenclature of the Owls appear to have been made till 1799, when Cuvier, in his 'Leçons d'Anatomie comparée' (table ii.), divided them into Hibous (*Otus*) and Chouettes (*Strix*). No types are indicated; and it is evident that this is a revival of the old Brissonian arrangement, so that *Otus* of Cuvier is merely a synonym of *Asio* of Brisson.

In 1806 Duméril published his 'Zoologie Analytique;' and here the arrangement is affected by the removal of the Hawk Owls (Nos. 10, 11, Linn.) to the genus *Surnia*. His genus *Bubo*, of which he is so often quoted as the proposer, is a nominal one only, and is said by him to contain the Horned Owls of Linnæus. Thus *Bubo* of Duméril = *Asio* of Brisson. Before considering the revolution worked by Savigny, it may be well to set down the exact state of the classification of Owls after Duméril's modification:—

1. Asio, Briss. (*Otus*, Cuv.; *Bubo*, Dum.)

1. *A. bubo* (L.); 2. *A. scandiaca* (L.); 3. *A. asio* (L.); 4. *A. otus* (L.); 5. *A. scops* (L.).

2. Strix, Linn. (*Strix*, Briss., Cuv.)

6. *S. nyctea*, L.; 7. *S. aluco* (L.: *stridula*, L.); 8. *S. flammea*, L.; 9. *S. passerina*.

3. Surnia, Duméril.

10. *S. ulula* (L.); 11. *S. funerea* (L.).

In 1809 Savigny (Descr. de l'Egypte, 8vo, p. 291) published an entire revision of the *Striges*, and defined all his genera in an orthodox fashion. His was by far the most scientific of the ornithological works published up to his time; and the incompleteness of his contemplated work is ever to be regretted. He defined clearly the genera *Syrnium* (type *Strix aluco*, L.) and *Scops* (type *Strix scops*, L.). His genus *Bubo* was a composite one, containing the *Strix otus* of Linnæus and a large Egyptian Horned Owl (his *Bubo ascalaphus*), the representative of the European *Asio bubo* (Linnæus). But, more important than all, Savigny characterized the genus *Strix*, and designated *Strix flammea* as the type. This he was perfectly justified in doing, as no type had previously been assigned.

For the sake of clearness, and at the risk even of being tedious, I present to my readers the condition of the *Striges* after Savigny had handled them in 1809.

1. ASIO, Briss.
(*Otus*, Cuvier; *Bubo*, Duméril, Savigny.)

1. *A. bubo* (L.); 2. *A. scandiaca* (L.); 3. *A. otus* (L.).

2. SURNIA, Duméril.

4. *S. ulula* (L.); 5. *S. funerea* (L.).

3. SYRNIUM, Savigny.

6. *S. aluco* (L.: *stridula*, L.).

4. SCOPS, Savigny.

7. *S. giu* (Scop.) (=*Strix scops*, Linn.); 8. *S. asio* (L.)*.

5. STRIX, Linn. et auct. præced. partim.
(*Strix*, Savigny, as restricted.)

9. *S. flammea*, L.; 10. *S. nyctea*, L.; 11. *S. passerina*.

In 1817 a further modification of the *Asiones* took place when Cuvier published the first edition of the 'Règne Animal;' for there he distinctly separates the genera *Bubo* and *Otus*, reserving to the former the Great Horned Owl (*Strix bubo*) as its type. His genus *Otus* contains both the *Bubones* of Savigny's work.

---

* *Scops asio* has always been recognized as a true *Scops*, and may be here disposed of along with *S. giu*. It was not mentioned by Savigny, being non-Egyptian.

In 1822 Fleming ('Philosophy of Zoology,' ii. p. 236) separates the Barn-Owl off as *Aluco*; but this species having been defined by Savigny as the type of *Strix*, the genus *Aluco* is but a synonym of the latter.

The year 1826 brings the last modifications of the Linnæan Owls, when Stephens proposed the genus *Nyctea* for the Snowy Owl (*Strix nyctea*, Linn.), to which, as recently demonstrated by Professor Newton, is also referable Linnæus's name of *scandiaca*. The genus *Asio* is therefore left with the Long-eared Owl, *Asio otus* (L.), which consequently becomes its type, while the sole unappropriated survivor of the genus *Strix*, viz. *S. passerina*, is in this same year seized by Boie and made the type of his genus *Glaucidium*. A final revision of the Linnæan genus *Strix*, in the year 1826, gives the following distribution of his species:—

1. ASIO, Briss. 1760.

1. *Asio otus* (L.).

2. STRIX, Linn. 1766.

1. *Strix flammea*, L.

3. SURNIA, Dum. 1806.

1. *Surnia ulula* (L.); 2. *Surnia funerea* (L.).

4. SCOPS, Savign. 1809.

1. *Scops giu* (Scop.) (=*Strix scops*, L.); 2. *Scops asio* (L.).

5. SYRNIUM, Savign. 1809.

1. *Syrnium aluco* (L.) (*Strix aluco*, L., et *Strix stridula*, L.).

6. BUBO, Cuvier, 1817.

1. *Bubo ignavus*, Forst. (*Strix bubo*, L.).

7. NYCTEA, Steph. 1826.

1. *Nyctea scandiaca* (L.) (*Strix nyctea* et *S. scandiaca*, L.).

8. GLAUCIDIUM, Boie, 1826.

1. *Glaucidium passerinum* (L.).

XXIV.—*Description of an apparently new Species of Teal from Kerguelen's Island.* By R. BOWDLER SHARPE, F.L.S., F.Z.S., &c., of the Zoological Department, British Museum.

THE Rev. A. E. Eaton has brought back with him some specimens of a small Duck, obtained in Kerguelen's Island during the stay of the recent Transit Expedition. I find that some specimens were procured in the same locality by the Antarctic Expedition; but they have never been determined (*cf.* Gray, List of Grallæ, Gallinæ, and Anseres, p. 138), and do not appear to have received a title in the 'Hand-list.' I therefore propose to describe this bird as

QUERQUEDULA EATONI, sp. n.

♂. suprà brunneus, plumis plurimis griseo marginatis, rufescenti-fulvo maculatis aut fasciatis: scapularibus nigricantioribus: pileo paullo rufescentiore plumis nigro medialiter striatis; facie laterali et gutture albicantibus, minutè nigro striolatis, mento fulvescenti-albo: corpore reliquo subtùs albicante, brunneo marmorato, plumis plerisque pectoralibus versus basin griseo-brunneis aut medialiter brunneo striatis: hypochondriis brunneis, albido terminatis et rufescenti-fulvo transfasciatis: subcaudalibus rufescenti-fulvis, nigro adumbratis, longioribus nigricantibus fulvo terminatis: tectricibus alarum superioribus cinerascenti-brunneis, majoribus pallidè badio terminatis, fasciam alarem formantibus: remigibus cinerascenti-brunneis, secundariis extùs purpureo bronzinis albido terminatis, speculum alare bronzinum vix sub certâ luce olivascente nitens exhibentibus: secundario proximo nigricante vel aspectu externo viridi nitente, medialiter cinerascente strigato, albo apicato: secundariis interioribus nigricantibus extùs pallidè brunnescentibus albo limbatis: rectricibus mediis nigricantibus, reliquis brunneis albo marginatis, nonnullis rufescenti-fulvo notatis: tectricibus subalaribus brunneis, inferioribus intimis et axillaribus albis brunneo maculatis, tectricibus majoribus cinerascentibus alæ inferiori concoloribus: rostro plumbeo, culmine nigro: pedibus cinerascentibus, membranis interdigitalibus nigris. Long. tot. 15·5, alæ 8·5, caudæ 4·8, tarsi 1·2.

♀. mari similis sed speculo alari absente, secundariis albo terminatis: caudâ brunneâ, rufescenti-fulvo fasciatim marmoratâ.

Hab. in insulâ Kerguelensi.

This plain-coloured Teal is allied to *Q. gibberifrons* and *Q. creccoides.* From the former it is at once to be distinguished by the fawn-coloured bar on the wing and the bronzy speculum, the wing-bar being broadly white, and the speculum black in *Q. gibberifrons.*

Q. creccoides resembles *Q. eatoni* in having the fawn-coloured wing-bar; but then the speculum is black, and the greater part of the bill is yellow.

Q. eatoni also has the axillaries whitish barred with brown, whereas they are quite *white* in the allied species; and, moreover, it has remains of rufous-buff bars on most of the feathers of the upper surface, the back being uniform in the other species. Altogether the species seems very well pronounced. Besides the three examples brought by Mr. Eaton, I have found in the Museum three Kerguelen-Island skins, collected during the voyage of the 'Erebus' and 'Terror.'

XXV.—*On some Birds from Spanish Guiana collected by* Herr Münzberg. By August von Pelzeln.

H. E. Hodĕk, an eminent taxidermist in Vienna, has submitted to me for inspection a small series of birds collected by H. Münzberg, as it is said, in Guiana. H. Münzberg travelled in former years in New Granada, and the birds now before me belong mostly to New-Granadan species. There can be little doubt that, by the habitat Spanish Guiana, probably the territory between the Upper Rio Negro and Orinoco, or adjacent parts of New Granada, is meant.

The species are the following:—

TINNUNCULUS SPARVERIUS (L.).

ASTURINA MAGNIROSTRIS (Gm.).

NAUCLERUS FURCATUS (L.). *El Tijerete.*

ATHENE FERRUGINEA (Pr. Neuw.). *Cabrilla.*

ATHENE MINUTISSIMA (Pr. Neuw.).
Two very dark-coloured specimens.

HEMIPROCNE ZONARIS (Shaw), var. ALBICINCTA.
Hemiprocne albicincta, Cabanis, Journ. f. Orn. 1862, p. 165 (Guiana, Mexico).
Chætura zonaris, Sclater, P. Z. S. 1865, p. 609.

The specimen received from H. Hodëk is distinguished by the character mentioned by Prof. Cabanis, *i. e.* inferior size and greater breadth of the upper part of the collar. The black of the body, especially on the upperside, is glossed with green, as in the oldest individuals of the common *H. zonaris* from South Brazil. Long. al. 7″ 5‴, caudæ 2″ 7‴,

A Jamaican specimen, received from Mr. Sclater in exchange, agrees well with that from H. Hodëk; its plumage is only a little less glossy.

It seems to me probable that *H. albicincta* is separable from *zonaris,* at least as a northern race.

STELGIDOPTERYX RUFICOLLIS (Vieill.).

BUCCO RADIATUS, Sclater.

HELEODYTES BICOLOR, sp. nov. *Carraquero.*
? *Heleodytes griseus,* Baird (nec Swains.), Rev. Am. Birds, p. 96 (Bogotá).

H. corpore supra et alis extus obscure brunneis; fronte et apicibus plumarum uropygii parum rufescentibus; stria superciliari a naribus ad nucham usque ducta; gastræo toto et alarum tectricibus inferioribus albis; rectricibus caudæ obscure brunneis, duabus mediis unicoloribus, reliquis fascia anteapicali alba, a rectrice exteriore versus medias latitudine descrescente, in quarta utrinque (mediis proxima) marginem pogonii externi haud attingente: rostro nigro, subtus pallido, pedibus corneis. Long. tot. 7½″, alæ 3″ 11‴, caudæ 4″, rostri a fronte 11½‴, a rictu 15½‴, tars. 15‴, fascia alba in rectrice extima 1″, in quarta 7‴, in quinta 3–6½‴ lata.

Hab. Guiana hispanica.

Obs. *H. griseo* (Swains.) similis sed major, corpore supra et alis extus obscure brunneis concoloribus; descriptio speciminis a Bogota apud Baird, l. s. c., sub nomine *H. grisei*, quoad colores cum ave nostra convenire videtur, sed avem minorem indicat*.

I sent the single male specimen to Messrs. Sclater and Salvin for examination; and they pronounce the species to be undescribed.

ANTHUS CORRENDERA, Vieill.

GRALLARIA RUFICAPILLA, Lafr.

CEPHALOPTERUS ORNATUS, Geoffr. jun.

HEDYMELES LUDOVICIANUS (L.).

EUSPIZA AMERICANA (Gm.).

PSITTACUS CHALCOPTERUS, Fraser.

PSITTACUS MELANOCEPHALUS, L.

CHLORŒNAS ALBILINEA (Gray).

LEPIDŒNAS SPECIOSA (Gmel.).

ODONTOPHORUS STROPHIUM, Gould.

EUPSYCHORTYX PARVICRISTATUS, Gould?

NOTHOCERCUS JULIUS, Bonap., ad. et pull.

The adult bird agrees tolerably well with Dr. Hartlaub's description (Journ. f. Orn. 1854, p. 410); but the upperside of head and nape is rather lighter than the back, and the breast and partly also the sides of body are greyish olivaceous, minutely vermiculated; the tarsus measures 2″ 2–3‴; the feet seem to have been dark, and not pale.

The chicken (in down, except the wings) resembles the adult in coloration; but head and nape are blackish, with whitish ends to the feathers, the creamy white speckles on the wings begin to appear, the breast is red.

---

* It was not possible for me to compare the description of *Campylorhynchus brevipennis*, Lawr., from Venezuela.

MACHETES PUGNAX (L.), pale variety.

An abnormally coloured specimen, with the plumage in much worn and abraded condition. Upperside, wing-coverts, and tail light buff and white, the latter with blackish fasciæ; breast pale buff; throat, abdomen, and primaries white.

Prof. Baird (B. N. Amer. 1858, p. 737) states, the Ruff has been frequently killed on Long Island; but I am not aware that its occurrence in the neotropical region has been before noticed.

GALLINAGO NOBILIS, Sclater.

RALLUS SEMIPLUMBEUS, Sclater. *Chorlo.*

XXVI.—*Notes on Severtzoff's 'Fauna of Turkestan' (Turkestanskie Jevotnie).* By H. E. DRESSER.

[Continued from page 250.]

101. TURDUS MERULA, L.; Severtzoff, p. 64.

Horizontal range. Breeds, and is also met with during winter, in districts I., II., and III., but is only found during winter in district IV.

Vertical range. Occurs during passage and in winter in district 2, and both during the breeding-season, as also in winter, in district 3, and breeds in district 4.

102. TURDUS ATRIGULARIS, Temm.; Severtzoff, pp. 64, 118.

Horizontal range. Breeds, and is found during winter, in districts I. and II., and during winter only in districts III. and IV.

Vertical range. Occurs during winter in districts 1, 2, and 3, being common in district 2; breeds in districts 3 and 4.

103. TURDUS MYSTACINUS, Severtzoff, pp. 64, 118, 119.

Vertical and *Horizontal range.* Similar to *P. atrigularis.*

Respecting these two Thrushes, the latter of which he describes as new, Severtzoff writes (pp. 118, 119) as follows:—

"These two species (the latter of which is Naumann's *T. bechsteini*;) have been long known, but the latter has always been described as the young of the former, which, from what I can see, is wrong; for I have examined over 200 specimens of both species in every stage of plumage, and find that the differences do not depend on age. I may give the diagnoses of these two species as follows:—

"A. *Turdus atrigularis* ♂ ad. Entire upper parts olive-brown, marked on the crown and back with dark spots; wings and tail dark brown; throat, cheeks, and breast black, the feathers having narrow greyish margins in the autumn; flanks olive-grey, underparts otherwise white; under tail-coverts brown; under wing-coverts marked with greyish yellow; adult but not old birds have blackish grey stripes on the sides of the throat, breast, and flanks, but these disappear after the second moult, first on the throat and breast, and then elsewhere; legs greyish brown, claws blackish; maxilla brown, lower mandible yellow, tipped with dark brown. The old female differs in not having the throat black, but blackish brown, with broad yellowish margins, which do not disappear in the spring; otherwise she resembles the male. The young of both sexes have the throat as in the female; but the margins to the feathers are broader, giving a pied appearance; the under wing-coverts are similarly coloured, but are marked with olive-grey lines; the under mandible is greyish brown, slightly marked with yellow at the base.

"B. *Turdus mystacinus* differs in the coloration of the throat, and both sexes at all ages have this part pied with greyish-brown, blackish, or brownish spots, which sometimes are almost absent in old females, except in the centre of the breast; on the sides of the throat there are two or three lines of feathers marked with broad blackish spots; across the breast is a greyish band spotted with black, these spots being larger in the males, which have the throat and breast altogether more boldly marked; but these differences in the sexes are not constant. The throat does not change in colour as the bird gets older; but the spots on the breast gradually disappear, and the lower mandible also becomes yellow as in *T. atrigularis*. Some of the young females have a dark throat, like old males, and some have signs of a light spot on the throat, so that immature birds of *T. mystacinus* and *T. atrigularis* cannot with certainty be distinguished. I may also mention that of both species we obtained many more females than males during winter in the gardens of Chimkent and Tashkend near the Syr-Darja, and it will therefore be necessary, before it can be positively stated that *T. mystacinus* is a good species, to obtain a series of summer-killed specimens of the adult bird as well as nestlings, and careful observations should be made during the summer season."

104. Turdus ruficollis, Pall.; Severtzoff, pp. 65, 119.

Horizontal range. Occurs during passage in districts I. and II., and during winter in district III., but is everywhere very rare.

Vertical range. Is met with during passage and in winter in districts 1 and 2.

In a few short notes on this species (p. 119) Severtzoff remarks that the bird described and figured by Radde (Reis. im Süd. von Ost.-Sib. taf. viii.) is *T. naumanni*, and not *T. ruficollis*, and adds that whereas *T. ruficollis* always has the flanks grey, *T. naumanni* has them marked brownish or rufous, and in old males the flanks are rufous, like the throat, which, connecting with the entire flanks, forms one continuous rufous-coloured area over the throat, breast, and sides, whereas in *T. ruficollis* the throat, and a circular patch covering the breast above, are rufous. To this I may add that in *T. naumanni* the inner webs of the quills are pale rufous to nearly two thirds of their length from the base, whereas even in very old examples of *T. ruficollis* the inner webs are only very faintly tinged with pale rufous buff towards the base of the feathers.

105. Turdus pallens, Pall.; Severtzoff, p. 65.

Observed only near the tower of Vernoje.

106. Turdus viscivorus, L.; Severtzoff, p. 65.

Horizontal range. Breeds and occurs during passage in district I.; breeds and winters in districts II., III., and IV.

Vertical range. Is found in winter in districts 1 and 2, and breeds in districts 3 and 4.

107. Turdus pilaris, L.; Severtzoff, p. 65.

Horizontal range. Occurs during passage and in winter in districts I., II., and III.

Vertical range. Is found during passage and in winter in districts 1 and 2.

108. Turdus iliacus, L.; Severtzoff, p. 65.

Horizontal range. Occurs but very rarely during passage, and in winter in district III.

Vertical range. Occurs very rarely during passage, and in winter in districts 1 and 2.

109. Myiophoneus temmincki, Vig.; Severtzoff, p. 65.

Horizontal range. Breeds in districts III. and IV.

Vertical range. Possibly occurs during passage in district 2, but breeds in district 3.

110. Petrocossyphus cyanus, L.

Petrocichla cyane, Severtzoff, p. 65.

Horizontal range. Breeds in districts II., III., and IV.

Vertical range. Occurs during passage in district 2, and breeds in district 3.

111. Monticola saxatilis (L.).

Petrocichla saxatilis, Severtzoff, p. 65.

Horizontal range. Breeds in districts I., II., III., and IV.

Vertical range. Occurs during passage in district 2, breeds in district 3, and is found during summer in district 4.

112. Saxicola œnanthe (L.); Severtzoff, p. 65.

Horizontal range. Breeds and is found during passage in districts I., II., III., and IV.

Vertical range. Occurs on passage in districts 1, 2, and 3, and breeds in districts 4 and 5.

113. Saxicola isabellina, Rüpp.

Saxicola squalida, Eversm., and *S. saltator,* Ménétr.; Severtzoff, p. 65.

Horizontal range. Breeds in districts I., II., III., and IV., and is found during passage in districts I., II., and III.

Vertical range. Occurs during passage in districts 1, 2, and 3, and breeds in districts 3, 4, and 5.

Severtzoff gives very detailed notes respecting the various species of Chats, which, however, I do not think it necessary to translate *in extenso*, as Mr. Blanford and myself went most carefully into the question in our monograph of the genus *Saxicola* (P. Z. S. 1874, pp. 213–241), and satisfied ourselves as to the identity of the various species referred to or described by Severtzoff.

114. SAXICOLA MORIO, Ehrenb.

Saxicola leucomela, Severtzoff, p. 65.

Horizontal range. Breeds in districts I., II., III., and IV., and occurs during passage in districts I., II., and III.

Vertical range. Breeds in districts 1, 2, and 3, and is met with during passage in districts 2, 4, and 5.

114 *β*. SAXICOLA LEUCOMELA (Pall.).

Saxicola lugens, Severtzoff, p. 65.

Horizontal range. Breeds in districts I., II., III., and IV.

Vertical range. Breeds in districts 1, 2, and 3, and occurs during passage in district 2.

115. SAXICOLA MONACHA, Rüpp.; Severtzoff, p. 65.

Horizontal range. Breeds in district IV.

Vertical range. Breeds in districts 2 and 3.

116. SAXICOLA MELANOLEUCA (Güld.).

Saxicola talas, n. sp.; Severtzoff, pp. 65, 119, pl. viii. figs. 1, 3, 4.

Horizontal range. Breeds in districts I., II., and IV., and occurs during passage in districts III. and IV.

Vertical range. Breeds in districts 2 and 3.

117. SAXICOLA VITTATA, Ehrenb.

Saxicola melanogenys, n. sp.; Severtzoff, pp. 65, 120.

Saxicola melanotus, id. pl. viii. figs. 5, 6.

Horizontal range. Breeds in district III., and occurs during passage in districts III. and IV., and possibly breeds also in the latter district.

Vertical range. Occurs during passage and breeds in district 1, and possibly breeds, but certainly occurs during passage, in district 2.

118. ?Saxicola leucopyga, Br.

Saxicola syenitica, Heugl.; Severtzoff, p. 65.

Horizontal range. Is a rare straggler during summer in district III., but breeds in district IV.

Vertical range. Occurs rarely during the summer in district 1, and breeds in districts 2 and 3.

It is impossible to state with any degree of certainty what species of Chat it is to which Severtzoff here refers, as he gives no description of it, and merely refers to it under the name of *S. syenitica,* Heugl., which is a doubtful species, probably identical with *S. leucopyga,* under which I have accordingly placed it, with a query.

119. Saxicola deserti, Rüpp.

Saxicola salina, Eversm.; Severtzoff. p. 65.

Horizontal range. Breeds in districts I., II., III., and IV.

Vertical range. Breeds in district 1, and occurs during passage in districts 2, 3, 4, and 5, but is rare in the last district.

119 β. Saxicola xanthomelæna, Severtzoff, p. 65, is probably referable to *S. melanoleuca;* but the description of it given by Severtzoff is too indefinite to enable one to say what it is. He merely states (p. 120) that it differs from *S. deserti* in having less black on the tail, which is the case with all other allied Chats. He gives the range as follows:—

Horizontal range. Breeds in district III.

Vertical range. Breeds in district 1.

120. Pratincola rubetra (L.); Severtzoff, p. 65.

Horizontal range. Breeds and is met with during passage in districts I., II., and III.

Vertical range. Occurs during passage in district 1, and breeds in districts 2, 3, and 4.

121. Pratincola rubicola (L.); Severtzoff, p. 65.

Horizontal range. Breeds and occurs during passage in districts I., II., III., and IV.

Vertical range. Is found during migration in districts 1 and 2, and breeds in districts 3 and 4.

Severtzoff refers to *Pratincola indica β,* as a subspecies or permanent variety under the name of *Pratincola rubicola β. indica,* and gives its range as follows:—

Horizontal range. Breeds in districts I., II., III., and IV.

Vertical range. Breeds in districts 2 and 3.

122. PRATINCOLA HEMPRICHII (Ehr.); Severtzoff, pp. 65, 120.

Horizontal range. Breeds in districts I., II., and III., but is rare.

Vertical range. Breeds in districts 2 and 3.

Severtzoff remarks (p. 120) that this species differs from *P. rubicola* in having the central tail-feathers black, with white bases, and the remaining rectrices white terminated with black.

Severtzoff divides the Nightingales of Turkestan into two forms, each of which he again subdivides into two subforms or subspecies. Not having had an opportunity of examining skins of these birds, I cannot determine whether they are good species or not, and therefore translate his remarks *in extenso,* leaving my readers to draw their own conclusions. I may, however, remark that when in Berlin, in September 1873, in company with Mr. Blanford, we saw several skins of Nightingales from Turkestan, among which was one undoubted skin of *Daulias philomela* (Bechst.); and there were also examples of *Daulias hafizi* (Severtz.), which is a good species, having the plumage less rufous above and paler below, and the tail is longer, and which was also obtained by Mr. Blanford in Persia. There was also a larger form than *D. hafizi,* which has been described by Dr. Cabanis (J. f. O. 1873, p. 79) under the name of *Luscinia golzii,* but which differs from *D. hafizi* only in size. In the following translation I use the names as given by Severtzoff, without, however, indorsing their correctness. Referring to the differences between these species, he writes (p. 120) as follows:—

"It appears to me that we have two species of *Lusciola luscinia,* which subdivide again into four subspecies, and besides these *Lusciola aedon* (Pall.), which subdivides into two subspecies; but I think it more advisible to treat of these all under the generic title of *Luscinia,* dividing them merely into four subspecies, though into two divisions or groups, viz. :—

"A. Breast uniform in colour.

"1. *Luscinia occidentalis* (*Motacilla luscinia,* Pall.). Crown, nape, back, and cheeks brownish grey; upper tail-coverts nearly light brown; wings similarly coloured to the back; tail rust-colour; under tail-coverts and flanks greyish brown; throat and sides of the neck grey, underparts white; bill greyish brown, with the sides of the mandibles and the base of the lower mandible yellow; legs dirty reddish; iris light brown. First primary rather shorter than the primary-coverts, the second equals the fourth, the third being the longest. Total length rather less than 7 inches. Specimens from the Lower Volga and Ural, and Southern Russia generally, as also in some parts of Turkestan, have the wings and tail darker, the abdomen greyish, the throat white; and the arrangement of the quills is as follows—$3=4>2>5$.

"2. *Luscinia hafizi,* nob. Crown, nape, back, and cheeks light brownish grey, tinged with olive; quills blackish brown, with ashy-grey edges; larger wing-coverts grey, except at the base, where they are blackish; above the eye light grey; rump and tail rusty brown; underparts dirty white; breast tinged with yellowish; bill violet-black; legs brown, with a reddish tinge; first primary equal in length to the primary-coverts, $3>4>5$, the fifth equals the second; but in some instances the second is about $\frac{1}{2}'''$ shorter than the fifth, but is always longer than the sixth; the lateral rectrices are $\frac{1}{2}''$ shorter than the central ones. This Nightingale is much larger than the western bird; for it measures as follows—total length $7''\ 5'''$ to $7''\ 6'''$, extent $10'\ 7'''$, wing $3''\ 6\frac{1}{2}'''$, tail $3''\ 1\frac{1}{2}'''$, the tail being covered to over half its length by the tail-coverts, culmen $5'''$, tarsus $11'''$. Some specimens closely resemble examples of *L. luscinia* from the Volga and the Ural, the wing formula being $3>4>2>5$, and the margins of the feathers are not grey, but light olive-brown; the breast is sometimes yellowish and sometimes greyish. Therefore it appears to me that the bird described by Eversmann as *L.*

luscinia, and referred to by me as a western form of *L. occidentalis,* should by right be placed with *L. hafizi.*

" *L. philomela,* Pall., differs from the above species only in being greyer; the upper parts are greyish brown, the tail light greyish brown, the under wing-coverts greyish white, and the breast light grey. Pallas met with it in the Southern Ural, and its western branches near Ufa, and in Turkestan on the Chatkal and Chirchik, at an altitude of from 6000 to 8000 feet. At a lower altitude in the Chirchik mountains specimens are found which are intermediate with *L. hafizi*; so that *L. philomela,* Pall., is a northern, and not a southern mountain-form of *L. hafizi.* Pallas mentions a western form of his *L. philomela,* which is probably *L. hybrida,* Brehm (Vogelf. p. 145), which has the upper parts as in *L. aedon* (Pall.), and the underparts as in *L. luscinia.*

" B. Underparts varied and not uniform in colour.

" 3. *Luscinia aedon* (Pall.) (*L. philomela,* Bechst.). Entire upper surface of the body, from the forehead to the rump, and the upper surface of the wings uniform olive-brown, the quills only having lighter edges, and shaded with yellowish; tail olive-brown, with a reddish tinge; cheeks, breast, and flanks grey, or olive-grey, with dark lines on and light edges to the feathers, which gives the underparts a pied or varied appearance; throat white, with olive-grey spots; abdomen and under tail-coverts pure white; first primary short, the second shorter than the primary-coverts, the third the longest; the upper tail-coverts cover three fifths, and the lower three fourths of the tail. Total length 7″ 5‴–7″ 8‴, extent 10″ 6‴–11″ 1‴, wing 3″ 6‴–3″ 7‴, tail 2″ 8‴, tarsus 11‴, middle toe 7‴, culmen 4¾‴.

" 4. *Luscinia infuscata,* nob., differs from *L. ædon* in being darker; the margins of the wing-feathers are browner; the tail is dark rust-colour, without any shade of olive; and the underparts are more clearly marked; the tail is covered by the upper tail-coverts to half of its length, and by the under tail-coverts to three fourths; the first primary is short, the second less than the primary coverts, $3 > 2 > 4$. In size it is smaller; and the tail is longer in proportion. Total length 7″ 1‴–7″ 2‴, extent 10″ 3‴–10″ 5‴, wing 3″ 5‴, tail 2″ 7‴, tarsus 10½‴, middle toe 6¾‴, culmen 4½‴.

"*L. infuscata* is an eastern bird; but, besides in Turkestan, it occurs on the Ural river, especially on the lower portion, during passage; but examples of it, as well as of *L. aedon*, from the Ural, are lighter than others from Turkestan. The most common species in Turkestan is *L. hafizi* and var. *L. philomela*; and *L. aedon* and *L. infuscata* (the latter being the commoner) have only been met with in Karatau, and during passage near Chimkent, Tashkend, and Samarcand."

The range of the above species is given as follows:—

123. Lusciola luscinia β. *hafizi*, Severtzoff, p. 65.

Horizontal range. Breeds in districts I., II., III., and IV., commonly in the three former.

Vertical range. Breeds in districts 1, 2, and 3, commonly in district 2.

Lusciola luscinia γ. *philomela*, Severtzoff, p. 65.

Horizontal range. Breeds and occurs during passage in districts II., and III.

Vertical range. Occurs on passage in district 2, and breeds in district 3.

124. Lusciola aedon, Severtzoff, p. 65.

Horizontal range. Is found on passage in districts III. and IV., and breeds in district III.

Vertical range. Occurs on passage in district 2, and breeds in district 3.

124*a*. Lusciola aedon β. *infuscata*, Severtzoff, p. 65.

Horizontal range. Breeds and occurs on passage in district III.

Vertical range. Occurs on passage in district 2, and breeds in district 3.

125. Cyanecula suecica (L.).

Lusciola suecica, Severtzoff, p. 65.

Horizontal range. Occurs during passage in districts I., II., III., and IV., and breeds in all but the last.

Vertical range. Occurs during passage in districts 1 and 2, breeds in district 3, and occurs rarely during summer in district 4.

125 *a.* CYANECULA WOLFI, Br.

Lusciola suecica β. orientalis, Severtzoff, p. 65.

Horizontal range. Occurs during passage in district IV.

Vertical range. Is met with during passage in district 2.

126. ERITHACUS RUBECULA (L.).

Lusciola rubecula, Severtzoff, p. 65.

Horizontal range. Rare in winter in district III.; observed near the town of Chimkent.

Vertical range. Rare in winter in district 2.

[To be continued.]

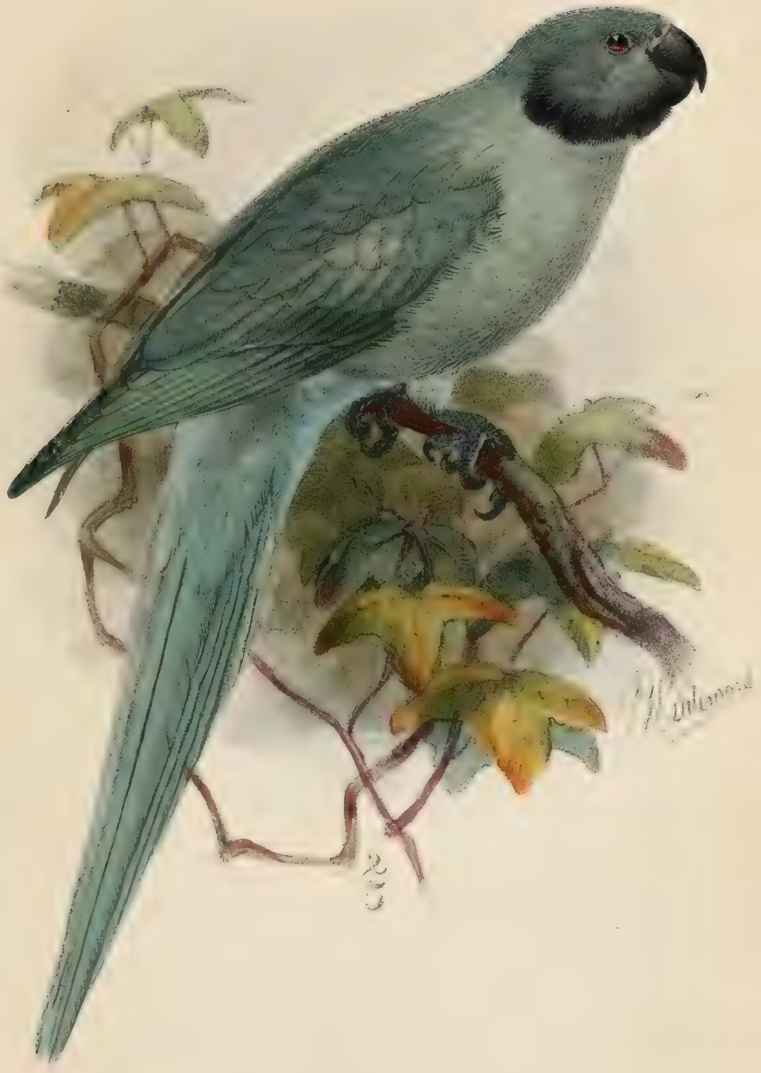
XXVII.—*Note on* Palæornis exsul.

By ALFRED NEWTON, M.A., F.R.S.

(Plate VII.)

SINCE the naturalists who were attached to the expedition for observing the late Transit of Venus at Rodriguez have returned home without procuring a specimen of the *Palæornis* which I some years ago described in this Journal (Ibis, 1872, p. 33) as coming from that island, and it may possibly be long before a second example of this rare bird is obtained, further delay in availing myself of the editor's offer to figure that which reached my hands in 1871 seems inexpedient. It is still greatly to be regretted, however, that we do not know the cock of this very peculiar species, because it has turned out that the anticipation I formerly expressed as to the probability of his possessing greater beauty than the hen, here represented (Plate VII.), was correct.

A manuscript ‘Relation de l'Ile Rodrigue,’ found last year at Paris, under circumstances which I have elsewhere explained, in laying some extracts from it before the Zoological Society of London (P. Z. S. 1875, pp. 39–43), contains a brief notice of a Parrakeet which there is apparently no danger of



J. G. Keulemans lith.

M & N. Hanhart imp.

PALÆORNIS EXSUL

AMERICAN MUSEUM
CENTRAL PARK,
NEW YORK.
OF NATURAL HISTORY.

error in our identifying with *Palæornis exsul.* This document, as M. Alphonse Milne-Edwards has satisfactorily shown (Comptes Rendus de l'Académie des Sciences, 1875, pp. 1212–1216*), must have been written prior to 1730. The anonymous author, after stating that there were three kinds of Parrots found in the island, and giving some particulars of the habits of the largest, which was doubtless the bird originally described by M. Milne-Edwards under the name of *Psittacus* (*Eclectus*?) *rodericanus*, but has since been referred by him to a genus which he calls *Necropsittacus*, says:—

"La seconde espèce est un peu plus petite et beaucoup plus belle, parcequ'ils ont leur plumage vert comme les précédents, un peu plus bleu et le dessus des aîles un peu rouge, aussi bien que leur bec."

The last words serve to show that the adult male of *Palæornis exsul*, should one ever be procured, will be found to have a red bill and a red alar patch, as is the case with so many other species of *Palæornis*. The unfortunate bird seems to be nearly extinct. Mr. Henry Slater informs me that during his stay in Rodriguez he saw a single example only. This was on the 30th of September, towards the south-western end of the island, where there is a good deal of wood, and he could have shot the bird if he had had a gun with him; but neither of his companions was favoured with a sight of this expiring species, and no further information about it could be obtained from the Creoles.

Magdalene College, Cambridge,
June 11, 1875.

---

* Translated, Ann. & Mag. Nat. Hist. (4) xv. pp. 436–439. In the original there is a singular misprint, which is corrected in the translation, of "postérieur" (*l. c.* p. 1213, line 25) for "antérieur." On the other hand the translator makes a slight mistake (*l. c.* p. 438, line 9) in putting "It" for "He" [*i. e.* Pingré].

XXVIII.—*On* Turdus javanicus *of Horsfield, and its allied form* Turdus schlegeli. By P. L. Sclater, M.A., F.R.S.

(Plate VIII.)

In my article on the geographical distribution of the genus *Turdus*, published in this Journal in 1861, I took occasion to state the synonyms of *Turdus javanicus* of Horsfield as being *Turdus fumidus*, Müller, and *Turdus hypopyrrhus*, Hartlaub, and at the same time to describe a new and nearly allied species from Timor as *Turdus schlegeli*, after the eminent director of the Leyden Museum, where I had met with the typical specimen. In his excellent work on the Birds of Borneo, lately published, Count Salvadori takes a different view of this matter. Misled apparently by Gray's 'Hand-list,' he treats of *Turdus javanicus* and *Turdus hypopyrrhus* as distinct species, and unites *Turdus schlegeli* to the latter. I am a little surprised, I must own, to find that Count Salvadori should prefer to follow the late Mr. G. R. Gray's compilation on this point rather than my article, founded, as it was, on the examination of actual specimens of a group of birds to which I had paid special attention. As, however, he has done so, I have felt bound to go into the matter again, and beg leave to offer the results of my renewed investigations to the readers of 'The Ibis.'

Turdus javanicus is very incorrectly described, like many others of the species characterized in Dr. Horsfield's memoir on the Birds of Java. Fortunately, however, two of the typical specimens are still extant—one in the India Museum, and one in the British Museum, received from the India Museum in 1860. I have examined these, and compared them with the type of *Turdus hypopyrrhus*. The mounted specimen in the India Museum has been nearly altogether eaten up by moth; but part of the ferruginous colour on the belly is still recognizable, and I think there can be no doubt to what species it belongs. The skin in the British Museum (which was received from the India Museum in 1860) is that of a young bird, and is of a nearly uniform brown; but there are traces of the rufous abdomen quite apparent, and I have no doubt of its belonging to the same species. The third example of Dr. Horsfield's *Turdus javanicus,* which was in the former East-India Company's Museum, cannot now be found.

Turdus fumidus was described by Müller in a note to the ethnographical volume of the 'Verhandelingen' (1839–44) from specimens obtained by him on the crater of Mount Gedee, in Java, at an altitude of 8000 feet above the sea-level. The types of this species are now in the Leyden collection, where I have examined them on two occasions.

Turdus hypopyrrhus was described by Hartlaub in 1844, in his catalogue of the Bremen collection. Having had the loan of the type of this species, through Dr. Finsch's kindness, I have been able to convince myself that it is exactly the same as *Turdus fumidus.*

In a footnote to his memoir on Delattre's collections (Compt. Rend. xxxviii. p. 6), Prince Bonaparte speaks of a "*Turdus nigricrissus,* Schiff," as a MS. name in the Senckenbergian Museum, Frankfort, and makes it the same as *T. hypopyrrhus,* which he endeavours to distinguish from *T. fumidus.* I have, however, shown that the two latter terms are synonymous ; so that, whatever the specimen so called in the Senckenbergian Museum may be, Bonaparte's name, *T. nigricrissus,* falls to the ground.

Another useless synonym is "*Turdus concolor,* Temm.," first published by Blyth in an article on Indian Thrushes in the J. A. S. B. in 1847, and copied by Mr. Gray and Dr. Salvadori. The only suggestion I can make as regards this term is, that it is a misprint, or *lapsus calami,* of Mr. Blyth for *fumidus* ; for I believe that Temminck never gave (nor would have given) such a misleading name to the present bird.

As regards *Turdus schlegeli,* which Mr. Gray and Dr. Salvadori unite to *Turdus hypopyrrhus,* I have again examined the typical specimen of that species in the Leyden Museum, and am quite convinced that, so far as a judgment can be formed from a single individual, it is a good and a distinct species. In this view I think I may say I have the concurrence of Prof. Schlegel—a naturalist by no means inclined to divide species unnecessarily—in whose presence I made a comparison of it with specimens of *Turdus fumidus*.

Under these circumstances I propose to arrange the synonyms of these two Thrushes as follows :—

TURDUS JAVANICUS. (Plate VIII.)

Turdus javanicus, Horsfield, Trans. Linn. Soc. xiii. p. 148 (1821) ; Blyth, J. A. S. B. xvi. p. 142 ; Horsf. & Moore, Cat. Mus. E. I. C. p. 196 ; Sclater, Ibis, 1861, p. 280 ; Salvad. Ucc. di Borneo, p. 237.

Turdus (*Merula*) *fumidus,* S. Müller, Verh. Nat. Gesch. Nederl. overz. Bezitt. Land- en Volk. p. 201 (1839–44) : Bp. Consp. p. 274.

Turdus hypopyrrhus, Hartl. Verz. Brem. Samml. p. 43 (1844) ; Salvad. Ucc. di Born. p. 238.

" *Turdus nigricrissus,* Schiff," Bp. Compt. Rend. xxxviii. p. 6 ; Notes Orn. Delattre, p. 29.

" *Turdus concolor,* Temm.," Blyth, J. A. S. B. xvi. p. 143 ; G. R. Gray, Handlist, p. 255.

Supra fuscus unicolor, subtus usque ad imum pectus concolor : abdomine castaneo : ventre medio albo : crisso fusco, albo striato : rostro et pedibus flavis : long. tota 9·0, alæ 4·5, caudæ 3·8.

Hab. Java, apud montes ad alt. 8000–9500 ped.

I believe the mountains of Java to be the only certainly ascertained locality for this Thrush. S. Müller, as already mentioned, met with it on the crater of Mount Gedee, in Western Java, at an altitude of 8000 feet. Mr. Wallace obtained an example in nearly the same district at an altitude of 9500 feet, which is now in the British Museum*.

---

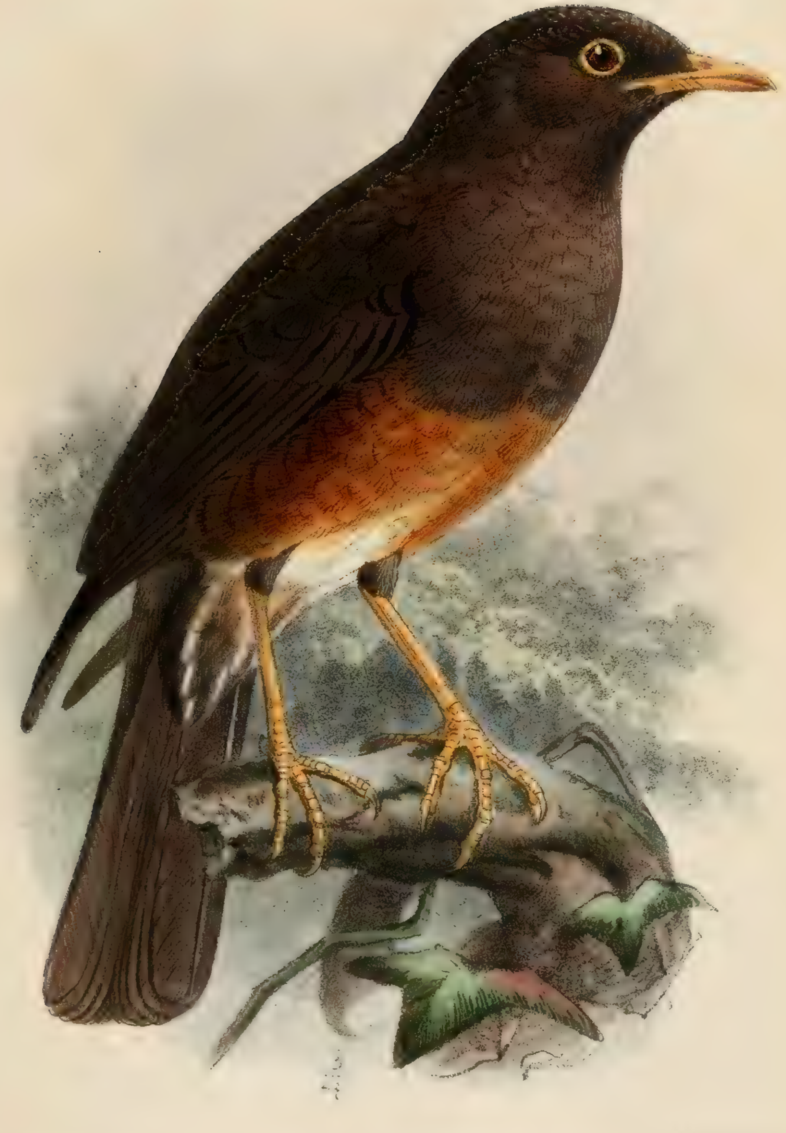
* Mr. Wallace's specimen was obtained on the extinct volcanic cone of Pangerango, 10,000 feet high, and is alluded to in his 'Malay Archipelago' as follows :—

"On the very summit, feeding on the ground among the strawberries that have been planted there, I obtained a dull-coloured Thrush, with the form and habits of a Starling (*Turdus fumidus*)."—*Malay Archipelago,* 3rd ed. p. 121.

Mr. Wallace kindly sends me the subjoined additional note :—

"'Iris olive ; bill, feet, and eyelids yellow ;'—is all the note I have to

Ibis 1875 Pl VIII



J.G.Keulemans, lith.

M & N Hanhart imp.

TURDUS JAVANICUS

AMERICAN MUSEUM
CENTRAL PARK
NEW YORK.
NATURAL HISTORY.

In Bonaparte's 'Conspectus,' Sumatra and Borneo are mentioned as the localities of this species. But there is no authority given for this statement, which, although subsequently adopted by several writers, probably originated in mere error.

The figure of this bird (Pl. VIII.) is taken from the typical specimen of *Turdus hypopyrrhus* in the Bremen Museum.

TURDUS SCHLEGELI.

Turdus fumidus (pt.), Müller, Verh. Nat. Gesch. Nederl. overz. Bezitt. Land- en Volk. p. 201.

Turdus schlegeli, Sclater, Ibis, 1861, p. 280; Wallace, P. Z. S. 1863, p. 485.

Supra fuscus unicolor, subtus in pectore dilutior: abdomine castaneo, crisso hoc colore tincto: rostro et pedibus flavis: long. tota 9·0, alæ 4·5, caudæ 3·8.

Hab. Timor (*S. Müller*).

Obs. Sp. a præcedente pectore fusco dilutiore, ventre medio non albo et crisso non striato distinguenda.

The only specimen I have yet seen of this species is the type in the Leyden Museum, obtained by Salomon Müller, near Penpaan, in Timor, as mentioned in the work above quoted. Müller considered it merely a variety of his *Turdus fumidus*, but has pointed out its distinguishing characters.

There is nothing at all remarkable in Timor thus possessing a peculiar species of *Turdus*. In his excellent memoir on the ornithology of this and the adjacent islands*, Mr. Wallace has shown that no less than 42 species, out of the 118 known to occur there, are restricted to the island. I trust, therefore, that *Turdus schlegeli* will be allowed by naturalists in future to stand as a good species—at any rate until a series of examples collected in Timor shall furnish some evidence to the contrary.

---

this bird, of which I only got one specimen, on the open summit of the mountain, where I saw several. If I remember rightly, it settled on the ground and on rocks, not on the trees and bushes."

* P. Z. S. 1863, p. 480.

XXIX.—*Ornithological Notes from the District of Karen-nee, Burmah.* By Robert Wardlaw Ramsay*.

Bounded on the west by the Tonghoo mountains (a long range of granite hills on the east side of the Sittang), on the east by the Salween river (the boundary of the Siamese territory), and on the north-east and north-west by Burmah proper and the Zimmé Shan States, lies the country known as Karen-nee, or, being interpreted, the Country of the Red Karens.

This country, rugged and mountainous throughout, is inhabited by numerous independent tribes of Karens, who are continually warring among themselves or with their common enemies the Burmese from Burmah proper and the Shan States. The people, as a rule, are strong, powerful-looking, and well built; their dress varies considerably, according to the tribe; but the ordinary clothing of the majority of the tribes consists of a coarse cotton blouse or loose tunic reaching to the knee; some few, however, wear short trousers or pantaloons made of the same material. This country has but seldom been visited by white people, and, I believe, never by a naturalist; so that it was with no ordinary feelings of pleasure that I received an invitation from Major Lloyd, the Deputy Commissioner of the Tonghoo district, to accompany him to Kyai-pho-gyee, the capital of the Karen-nee country, whither he was proceeding on a political mission from the Indian Government.

In the year 1854 Mr. O'Reilly, then Assistant Commissioner at Tonghoo, went on duty to Karen-nee; and later, in 1861, Major Lloyd travelled through the country. During that expedition he formed a considerable collection of specimens of natural history, chiefly of birds; unfortunately the majority of the best specimens most mysteriously disappeared, but eventually, I believe, found their way into the East-India Company's Museum in Calcutta. Since this visit of Major Lloyd's nobody, one or two of the American Baptist Missionaries excepted, has, as far as I know, penetrated into this country.

---

* [The foot-notes to this paper have been added by Lord Walden, who has examined Mr. Ramsay's collection.—Ed.]

It was hardly to be expected that the trip would produce a very great number of novelties, owing to the hurried way in which the party travelled through the country; but still several new species will be found among my birds, of which I collected during the five weeks between four and five hundred skins, referable to about one hundred and fifty species*. This collection has since been added to by the exertions of a brother officer, who spent some weeks during April and May in the hills, at altitudes varying from three to seven thousand feet, and who very kindly gave me the birds that he had collected.

Of three or four of the species that I obtained in Karen-nee, I recognized the descriptions in 'Stray Feathers' (vol. ii. p. 441–447), viz. *Macropygia assimilis*, Hume, *Garrulus leucotis*, Hume (since obtained within a mile of Tonghoo), *Gampsorhynchus torquatus*, Hume, &c. These species were obtained by Mr. Davison in the Tenasserim provinces at much the same time and altitudes at which I was working nearly a hundred miles further north.

We started into the hills on the 5th March, in an easterly direction, making a gradual ascent. On the second day the sight of *Analcipus trailli* warned me that we were somewhere near 2000 feet above the sea. From day to day we marched at one time over hills of granite, at another over sharp ridges of limestone, the nature of the fauna varying as we ascended to a greater elevation. At 3500 to 4000 feet the jungles assumed a great change, stunted evergreen trees and the Burmese pine (*P. latteri* ? Brandis) taking the place of the larger trees of the forests below. A great change also had taken place among the birds. No Bulbuls, no Drongos, and very few Woodpeckers; but Shrike Tits (*Leiothrix*) in abundance, and the more homely Titmice (*Parus*), Grey Creepers (*Certhia*), and Green Warblers (*Phylloscopus*) appeared. The noisy *Cyanops franklini*, Bl.†, had long since replaced the almost equally noisy but more melodious *Megalæma hodgsoni* of the plains.

---

* Notes on this collection, and on all the others made at Rangoon and Tonghoo by this indefatiguable collector, will shortly appear in the J. A. S. of Bengal.—W.

† *Megalæma ramsayi*, Walden (Ann. & Mag. N. H. (4) xv. p. 400).—W.

The extraordinary want of birds of prey throughout the whole of the Karen-nee country was very marked; I can safely say that from the time that we left the banks of the Sittang, where an Osprey was fishing, until we arrived at our destination, the only birds of prey that we met with were a Kestrel, a *Ninox*, and a dark-coloured Falcon, which I met with but failed to obtain on several occasions in the stunted teak-forests, and which may have been *Erythropus amurensis*.

Day by day interesting birds kept falling to my gun, and also to that of Major Lloyd's, who was a most indefatiguable collector. At the higher elevations I naturally met with many species for the first time, and consequently the collecting was more interesting.

At Kyai-pho-gyee itself, which is situated in the midst of an open, undulating, grassy country dotted over with patches of low scrub-jungle, at an elevation of 3300 feet, I had more time to look about me; for the party was to halt for a week. The first thing that struck the ear on emerging from the jungles into the open country was the note of *Cuculus canorus*, whose "cuckoo" resounded on all sides. The painted Francolin (*Francolinus sinensis*) was another bird which was very abundant, and always denoted its whereabouts by its extraordinary call, which, when rendered on paper, somewhat resembles the syllables *kŭk-kŭk-kuich, kā-kā*. These birds, together with Quail of three different species, and a hare (*Lepus peguanus*, Bl.) afforded very fair sport to our party.

The weather during our stay in Karen-nee was exceedingly pleasant and cool, the thermometer ranging from 50° at night to 96° Fahrenheit in the sun during the day.

The patches of jungle on the hill-sides and on the borders of the ravines proved to be the most rich in birds; and many species were there found that I hardly expected to meet, such as *Sibia*, *Actinodura*, *Niltava**, and *Garrulus leucotis*. The latter was far from common; but the beautiful *Urocissa mag-*

---

* *Sibia pianoides*, *Actinura ramsayi*, Walden, and *Niltava sundara*.—W.

nirostris was very common, flying from copse to copse and tree to tree with its peculiar quivering motion of the tail. On the waste land were found Pipits and flocks of Buntings, chiefly *Melophus melanicterus,* and *Emberiza pusilla.* Even here there was a great dearth of birds of prey. One species of Vulture (*Gyps indicus,* I think) was continually sailing round the camp accompanied by swarms of *Milvus govinda*; over the plains and hill-sides occasional Harriers (*Circus æruginosus* and *C. melanoleucus*) were quartering the ground, whilst far above the Kestrel would be seen suspended in the air. With the exception of a single Harrier I one day saw, and thought was *Circus cineraceus,* these were all the birds of prey that we met with. The common Mynah (*Acridotheres*) * of the country appeared to me to be very different from any that I had seen before; but whether it is a distinct species or not remains to be proved. One Oriole (*Oriolus indicus*) was shot in a small clump of pine trees in a very exposed situation. This was the first Oriole that I had met with since descending the eastern side of the Tonghoo hills.

From Kyai-pho-gyee we moved on to a small village on the frontier of the Shan States, situated in a bare stony plain, bordered on either side by low ranges of jagged limestone rocks; these rocks were perforated through and through with caves—the abode of countless numbers of Bats. About these rocks I found *Hirundo daurica,* Linn.†, not uncommon, but only succeeded in securing one specimen.

In the vicinity of the village was a broad tract of country artificially inundated by a stream which passed through it; this place was tenanted by vast flocks of Waders of all sorts, probably on their way northwards for the summer. *Himantopus intermedius,* Bl.? was particularly abundant, but very shy and wary, quite the reverse of what I had found them on a former occasion on the plains of Pegu.

On the 30th March we fairly started on our homeward journey over the same ranges of hills that we had just crossed some fifty miles further south. On the 2nd April we reached 6000 feet, the greatest height arrived at during the trip; here

---

* *A. siamensis,* Swinhoe.—W.

† *Cecropis striolata.*—W.

I met with *Paradoxornis* of two species*, *Cutia nipalensis, Leioptila annectans*†, *Brachypteryx cruralis, Oreocincla mollissima,* and a Laughing Thrush, which I imagine is Mr. Hume's *Gampsorhynchus torquatus*‡. Among the pine trees I was rather surprised to find *Emberiza pusilla.* A little lower down I met, for the first time, with the lovely little Broadbill (*Serilophus lunatus*) going about in the tops of the trees in small parties. The iris of this bird appears to be brown, but when examined in the sunlight is the most brilliant iridescent green; the bill is turquoise-blue when freshly killed, but this colour disappears very soon after death.

In a bamboo-jungle, at 2000 feet, that had run to seed, I came one day upon flocks of Rose Finches, *Carpodacus erythrinus,* feeding upon the seeds; this was the first time that I had seen this bird, although we had passed through miles and miles of bamboos.

These bamboo-seeds are a very fair substitute for rice, as we know from experience—not unlike pearl-barley when cooked; and fortunate it is for the Karens that they are so; for the whole of their rice-crops this year have been devoured by huge armies of rats. The stories told by the natives of the countless myriads of rats could be easily believed by us, as we came through the country and saw the ravages that had been committed by them. I have sent home specimens of this rat §; but I think it has already been described by Mr. Blyth.

Two days' march from the rat-infested country we found ourselves descending the western slope of the Tonghoo hills, where I obtained a specimen of *Macropygia assimilis,* Hume. The beautiful Irenas had all of a sudden become common, whereas on the eastern slope of the hills I do not think they are found at all. It seems strange that there should be so distinct a line beyond which apparently the *Irena* cannot extend; and that this is the case I am certain, for it was so remarkable on crossing these hills, both in going and coming.

---

* *P. ruficeps* and *P. gularis.*—W.

† *L. saturata,* mihi, distinguished from *L. annectans* by the deep chestnut colouring of the lower back, uropygium, and upper tail-coverts.—W.

‡ No species of *Gampsorhynchus* is contained among the birds which have arrived in England.—W.

§ *Mus robustulus,* Blyth?—W.

‖ A good species, quite distinct from *M. ruficeps* of Java.—W.

On the 10th April we arrived once more in Tonghoo, after a pleasant trip of five weeks, in which time between two and three hundred miles had been traversed by our party.

XXX.—*Notes on a 'Catalogue of the* Accipitres *in the British Museum,' by* R. Bowdler Sharpe (1874). By J. H. Gurney.

[Continued from page 236.]

(Plate VI.)

Under the genus *Astur* Mr. Sharpe includes upwards of thirty species, which, as it appears to me, are naturally divisible into several subgeneric groups, to which I now propose to refer, at the same time making observations on some of the species of which these groups are composed.

The first of these, to which the generic name of *Astur* may be applied in its restricted sense, consists of three species—*A. palumbarius*, *A. atricapillus*, and *A. hensti*.

With reference to *Astur palumbarius*, Mr. Sharpe remarks that it apparently reaches beyond 60° N. lat. only in Scandinavia; but in 'The Ibis' for 1873 (p. 58), it is recorded as occurring also in the vicinity of Archangel. In addition to the localities for this species given by Mr. Sharpe, I may mention that the Norwich Museum possesses an adult pair from Tangiers*, and that it also probably occurs in Japan, as I have seen a Japanese painting which accurately represented an adult of this species.

It may be desirable to remark, as the circumstance is not referred to by Mr. Sharpe, that a considerable variation of tint occurs in the immature specimens of *Astur palumbarius*, some of them exhibiting a conspicuous ochraceous hue, especially on the underparts, which is more or less entirely absent in others, though there is no difference in the form and character of their markings.

---

* [*Cf.* Irby, Orn. Str. Gibr. p. 36.—Ed.]

In the autumn of 1869 I saw in the museum at Lille two individuals of this species from the Ural Mountains, which were probably very old birds, and in which the transverse markings on the underparts were unusually narrow, approaching in this particular to the character of the corresponding markings in *A. atricapillus*; the same museum contained other and, presumably, younger adults from the same locality, in which the markings on the breast were of the normal character usual in adult specimens of *A. palumbarius*.

Although these markings are always narrower in *Astur atricapillus*, when adult, than in the corresponding stage of *A. palumbarius*, yet differences in this respect, as well as in some others, have been observed between the Goshawks which are commonly obtained in the eastern parts of North America and those which are found in the more western districts; Mr. Ridgway* designates the Western North-American form as "var. *striatulus*, Ridgway," but remarks, "In regard to the form indicated . . . . as var. *striatulus*, Ridgway, I am as yet undecided whether to recognize it as a geographical race, or to merely consider the two adult plumages as representing different ages of the same form."

Mr. Ridgway adds the following descriptions:—

"Var. *atricapillus*.

"*Adult*. Markings of the lower surface coarse and ragged; feathers of the pectoral region with broad, median, longitudinal streaks of the same slaty tint as the transverse bars, and with only the shafts black; tail-bands distinct.

"*Young*. Pale ochraceous markings prevailing in extent over the darker (clear greyish umber) spotting; stripes beneath narrow, clear brownish, those on the flanks linear.

"Var. *striatulus*.

"*Adult*. Markings of the lower parts fine and delicate, and so dense as to present the appearance of a nearly uniform bluish ashy surface; feathers of the pectoral region without the median stripes of slaty, but with broad shaft-marks of deep black, contrasting very conspicuously with the finely mottled general surface; tail-bands obsolete.

---

* *Vide* Baird, Brewer, and Ridgway's 'History of North-American Birds,' vol. iii. p. 238; also Sharpe's 'Catalogue,' Addenda, p. 456.

"*Young.* Darker (brownish black) markings prevailing in extent over the lighter (nearly clear white) ones; stripes beneath broad, brownish black, those on the flanks cordate and transverse."

Mr. Ridgway appears never to have seen his "var. *atricapillus*" from the western regions of North America; but he describes an adult female from Colorado which, though otherwise agreeing with his "var. *striatulus*," shows "a single feather on the lower parts which is coarsely barred, as in the eastern style, while all the rest are finely waved and marbled, as in the western;" and he has also occasionally met with adult specimens obtained in the eastern states which agreed in their markings with the western phase, which he has designated as "*striatulus*;" but he suggests that these may have been only migratory stragglers from more westerly localities.

The second subgeneric group to which I propose to refer is that to which Kaup assigned the name of *Lophospizia* (or, more correctly, *Lophospizias*) containing *L. griseiceps*, *L. trivirgatus*, and *L. indicus*, the two latter of which Mr. Sharpe treats as only doubtfully distinct from each other; and as the difference between them appears to be one of size only, I think it may be useful to note some measurements, chiefly taken from specimens in the British and Norwich Museums, and commencing with those of the larger race (*L. indicus*):—

	Wing from carpal joint. in.	Tarsus. in.	Middle toe, s. u. in.
Presumed males in British Museum:			
From Nepal	9·4	2·5	1·4
Ditto	9.5	2·5	1·6
Presumed females in Norwich Museum:			
From Nepal	10·7	2·8	1·7
From Chota, Nagpore, Bengal	10·2	2·5	1·4
Female from Darjeeling, recorded in Jerdon's 'Birds of India,' vol. i. p. 47	11·5		
Female from Saughboom, Bengal, recorded in Col. Tickell's MS. in the library of the Zoological Society	10	2·75	

The following measurements are those of specimens which appear to be referable to the smaller race (*L. trivirgatus*):—

	Wing. in.	Tarsus. in.	Middle toe, s. u. in.
Presumed males in Norwich Museum:			
From Ceylon	7·6	2·1	1·1
From Borneo	7·5	2·3	1·2
Female obtained* in Formosa, and recorded by Mr. Swinhoe in 'The Ibis,' 1866, p. 395	9	2·75	1·62
Presumed females in Norwich Museum:			
From Philippine Islands	8·1	2·1	1·2
From Cambodia	8·8	2·2	1·2
From Malacca	9·2	2·5	1·4
From Sumatra	8·4	2·4	1·4
From Borneo	8	2·5	1·2
A specimen in the British Museum, from East Java, marked ♀ by Mr. Wallace	9	2·3	1·3
An unsexed specimen, from Upper Pegu, recorded in 'Stray Feathers,' iii. p. 24	8·6	2·7	

From the above particulars it appears clear that both the larger and the smaller race vary much in their proportions, and it seems to me not very easy to draw the line between them.

The next species to which I am desirous to allude is *Astur pectoralis*, Bon., in treating of which Mr. Sharpe has omitted to refer to the figure given of it in 'The Ibis' for 1861, pl. 10.

The Norwich Museum contains a presumed male, which is not included in the list of the specimens of this Hawk recorded in 'The Ibis' for 1874 at p. 321.

As the Leyden specimen, of which the measurements are given by Mr. Sharpe, and that at Antwerp, of which the dimensions were recorded by Dr. Sclater in 'The Ibis' for 1861, appear by their size to be both female birds, I add the following particulars of the supposed male which is preserved in Norwich:—wing from carpal joint 9·1 inches; tarsus 2·1;

---

* The Norwich Museum possesses a specimen from Formosa which I believe to be the identical one above recorded; but I make the length of its wing 9·5 inches; the other measurements agree.

middle toe, s. u. 1·3; culmen from anterior margin of cere ·5.

It will be seen by these measurements of the culmen and middle toe, that, according to the rule given by Mr. Sharpe at p. 47 of his 'Catalogue,' this species comes rather under his genus *Accipiter* than under that of *Astur*; its natural position appears to me to be intermediate between the Asturine subgenus *Lophospizias* and the Accipitrine subgenus *Cooperastur*, to which it was referred (and, on the whole, I think rightly) by Bonaparte in the Rev. et Mag. de Zool. for 1854, p. 538.

Another and still scarcer South-American form, *Falco poliogaster* of Temminck (Pl. Col. 264) is included by Mr. Sharpe in his genus *Astur*; but from my recollection of the type specimen at Leyden (the only example that I remember to have seen*), I have little doubt that it ought to be assigned to a distinct subgenus—though, as some years have elapsed since I examined the Leyden specimen, I have not the requisite data to enable me to characterize in detail its subgeneric peculiarities.

Mr. Sharpe also includes in his genus *Astur* a long list of species which may be conveniently described as short-toed Sparrow-Hawks. Most of these have been referred by various ornithologists to Mr. Gray's genus *Micronisus*; but as the type of that species is (as has been already mentioned†) a *Melierax*, it will be better to use in its place Dr. Kaup's term of *Scelospiza* (more properly spelled *Scelospizias*), the type of which (*S. franciscæ*) belongs to the group to which I am now referring.

The subgenus for which I thus propose to use the name of *Scelospizias* consists of two natural divisions—the one comprising those most slenderly formed species of which *S. badius* is the most familiar example, the other those somewhat thickly built and, for the most part, larger species which are connected, more or less closely, with *S. tachiro*.

---

* [We believe that the specimen at Leyden, obtained by Natterer, is the only one in existence in any museum. The bird from Panama, called *Micrastur poliogastur?* by Mr. Lawrence, belongs not to that species, but to *M. mirandolii.*—Ed].

† *Vide antea*, p. 236.

To the first of these divisions belongs Kaup's typical species *S. franciscæ*, respecting which I have a few remarks to offer. Mr. Sharpe gives Madagascar and Joanna Island as localities for this species; but it seems to me that the Joanna bird is specifically distinct; and as the name of *franciscæ* was given by Sir A. Smith to the Madagascar race, I would propose for that found in Joanna Island the specific name of *pusillus*, as it is the smallest of its genus except *S. brutus*, which is of about the same size.

Scelospizias pusillus, which was figured in 'The Ibis' for 1864 (pl. vii.), from a specimen in the Norwich Museum, under the title of *Accipiter francesi*, differs from the true *S. franciscæ* of Madagascar in its smaller size, and in two characteristics of its adult plumage, the first being the darker hue of its slate-coloured upper surface, and the second the earlier attainment and greater purity of the white plumage on the breast and parts adjacent.

In *S. franciscæ* these parts are crossed with transverse vinous-brown bars, which gradually become narrower and fainter as the bird advances in age, until they ultimately, but (so far can be judged from a series of specimens) by slow and successive changes, become so faint as to be scarcely perceptible, though I have never seen a specimen, authenticated as having been obtained in Madagascar, in which they were entirely absent. In *S. pusillus*, on the contrary, the undersurface assumes a garb of pure and unbroken white on the occasion of the first moult in which the bird loses its immature dress, as is evidenced by a specimen in the British Museum, which, though it has nearly attained its adult plumage, still retains a few brown feathers, indicative of immaturity, on its throat, flanks, and thighs, but with these exceptions is perfectly white on its under surface.

The comparative dimensions of the two species will be shown by the following measurements, all taken from specimens in the museum at Norwich, except the first, which is from that in the British Museum to which I have already referred.

	Wing from carpal joint. in.	Tarsus. in.
S. pusillus, from Joanna Island:		
Presumed ♂	5·75	1·62
Presumed ♂	5·5	1·8
Presumed ♀	6·2	2
S. franciscæ, from Madagascar, ascertained by Mr. E. Newton to be ♂ ..	6·2	2
Ascertained by Mr. E. Newton to be ♂	6	1·9
Presumed ♀	7	2·1

The following description of the coloration of *S. pusillus* in its adult stage has been drawn up by Mr. Reeve, the able curator of the Norwich Museum, to whose obliging assistance I am much indebted in these notes, from the presumed male and female preserved in that collection:—

"♂. Head, neck, and the whole upper surface, including the tail, slate-colour—the crown of the head, wing-coverts, scapulars, and back being darker than the other parts; the sides of the neck somewhat paler, and dying away to a small patch of dirty white on the sides of the upper breast. Throat and whole under surface, including the under tail- and wing-coverts, white; the outer surface of the tail is slightly barred, its lower surface (which is white near the tail-coverts, and a more or less dirty grey elsewhere) is without bars on the two central rectrices, but the three adjoining feathers on each side show six very distinct greyish brown bars, whilst the outermost pair are scarcely barred at all.

"♀. Only differs from the ♂ in having the patch on each side of the upper breast more deeply coloured with dusky brown, and consequently more conspicuous; also in the tail being less slate-coloured, and more or less barred both on the upper and under surface of all the rectrices. The under surface of the primaries is also very strongly barred; and the slate-coloured portions of the plumage are, perhaps, a little more brownish throughout than in the male."

A third, nearly allied species, *Scelospizias brutus*, to which I have already alluded, has, I believe, been at present only found in the Island of Mayotte, another of the Comoro group; and from it we may pass to the consideration of the allied continental forms, *Scelospizias polyzonoides, S. sphenurus, S. badius, S. poliopsis,* and *S. brevipes,* all of which are treated by Mr. Sharpe as being severally subspecies of one and the same actual species, to which he applies, in a comprehensive sense, the name of *Astur badius.* I am, however, of opinion that at least two of the above list, *S. polyzonoides* and *S. brevipes,* differ sufficiently from their immediate congeners to be well entitled to rank as fully distinct species.

It may be useful, for the sake of comparison, to give a few measurements of these nearly allied forms, taken from some of the specimens in the Norwich Museum, commencing with those of *S. polyzonoides* :—

	Wing from carpal joint. in.	Tarsus. in.	Middle toe, s. u. in.
From the Zambesi. Presumed ♂ ..	6·7	1·7	1
From Elephant's Vley, Damaraland. Marked by Mr. Andersson as ♂	6·8	1·7	1
From Trans Vaal. Marked by Mr. Ayres ♀	7·5	1·8	1·1

The following are measurements of *S. sphenurus* :—

	Wing from carpal joint. in.	Tarsus. in.	Middle toe, s. u. in.
From the Gambia. Presumed ♂ ..	7	1·8	1
From Bissao. Presumed ♂	7·4	1·7	1·1
From Casamanze. Presumed ♀ ..	7·10	1·8	1

Mr. Sharpe speaks of very old birds of this race gradually losing the transverse bars on the upper portion of the breast; but I have never seen one in which some slight trace of these bars did not still remain.

I will now add the measurements of five specimens of the true *S. badius* :—

	Wing from carpal joint. in.	Tarsus. in.	Middle toe, s. u. in.
From Travancore. Presumed ♂	7·2	1·8	1·1
From Oudh. Presumed ♂			
From Cashmere. Presumed ♂	7·8	1·9	1·2
From Northern India. Marked by Mr. Hume as ♀	8·1	2·2	1·2
From Malabar. Presumed ♀	8	2·1	1·3

Mr. Blanford was so good as to show me a female Hawk, killed by him in Baluchistan, which bore so great a resemblance to *S. badius* as perhaps not to be separable from that species, but in which the tarsus measured 2·3 inches, and the middle toe s. u. 1·4; I have unfortunately no memorandum of the length of the wing in this specimen.

Mr. Sharpe, in speaking of the succeeding race, *S. poliopsis*, states that it is a "much paler blue above" than *S. badius*; but in the specimens which I have examined this is certainly not the case.

Two adult males from Siam, of which the measurements are annexed, are fully as dark on the upper parts as ordinary males of *S. badius*; and the adult male from Ceylon, of which I have also given the dimensions below, is decidedly darker in the hue of the slate-colour in the upper parts than either the two Siam males or the ordinary Indian form; I have, however, considered all these as examples of *S. poliopsis*, on account of the dark vinous hue of the bars on the under surface, this character being possessed by all the three examples.

The following are the measurements of *S. poliopsis* above referred to:—

	Wing from carpal joint. in.	Tarsus. in.	Middle toe, s. u. in.
From Ceylon. Presumed ♂	7·5	1·8	1·1
Two from Siam. Both presumed ♂ ..	7·7	2	1·1
From Siam. Presumed ♀	9	2·1	1·2

I propose to conclude this series of measurements by those of four specimens of *S. breviceps*, all obtained in Syria.

	Wing from carpal joint. in.	Tarsus. in.	Middle toe, s. u. in.
Presumed ♂	8·5	1·8	1
Presumed ♂	8·7	1·9	1·1
Presumed ♂	8·8	1·9	1
Presumed ♀	9·5	2	1·1

Proceeding to the second division of the subgenus *Scelospizias*, I may remark, with reference to *S. tachiro*, that I believe the measurements given by Mr. Sharpe as those of the two sexes of this species are both those of male birds. Two females from Natal, acquired by the British Museum subsequently to the publication of Mr. Sharpe's volume, measure 9·7 and 9·9 inches respectively in the wing, and 2·75 in the tarsus, which, so far as I have observed, is about the usual length of these parts in female specimens of this Hawk.

The late Dr. Dickerson* obtained at the Zambesi an unusually large adult female of *S. tachiro,* which was decidedly paler in its coloration throughout than is the case in ordinary specimens. I have recently examined this skin, which is preserved in the Norwich Museum, and I do not consider that the pale colour is due (as might be supposed) to the plumage being in a faded or worn condition.

The allied Abyssinian race, *S. unduliventer* (Rüpp.), though not separated by Mr. Sharpe from *S. tachiro,* is readily distinguishable when adult by the richer rufescence of the flanks and transverse pectoral bars: this race extends westwards to Senegal; and an adult female from Casamanze in the Norwich Museum is the type of *Astur tibialis,* Verr., which must therefore sink into a synonym of *S. unduliventer*; this specimen measures 9·5 inches in the wing and 2·8 in the tarsus; but a female in the British Museum, from Shoa, is slightly smaller, measuring 8·55 in the wing and 2·7 in the tarsus.

The Hawk from the Cameroons in Captain Shelley's collection, from which Mr. Sharpe took his description of *Astur tibialis,* is probably the immature plumage of some other species, which is apparently at present unnamed.

Since the publication of Mr. Sharpe's volume, the British Museum has obtained from the river Danger a Hawk which may prove to be a still younger example of the same species as that in Captain Shelley's collection; if so, the latter would seem by its dimensions, which are given by Mr. Sharpe, to be a male, and that from the river Danger to be a female, as it measures 8·8 inches in the wing and 2·6 in the tarsus; this specimen is less rufous on the underparts than Captain Shelley's bird, though showing traces of that tint on the breast and flanks; its thighs, instead of being rufous, as in the

---

[*] *Vide* Ibis, 1868, p. 144.

Cameroon Hawk, are white, broadly barred with black; and it also exhibits traces of transverse bars on the outer rectrices.

Scelospizias unduliventer may reasonably be considered a subspecies of *S. tachiro*; and if the still more brightly coloured race from the Gold Coast (*Astur macroscelides,* Hart.) be admissible as distinct from *S. unduliventer,* it must also be considered a subspecies, and it has been so treated in Mr. Sharpe's catalogue.

Mr. Sharpe gives the locality of *S. macroscelides* as "Gold Coast to Gaboon;" but the Gaboon race is in reality much more distinct from the true *S. macroscelides* of the Gold Coast than the latter is from *S. unduliventer* of Senegambia and Abyssinia, being not only darker and more richly coloured, both in the slate-coloured and in the rufous portions of the plumage, but also much smaller, as will be seen from the following measurements of an adult male and female, obtained by Mr. H. T. Ansell at the river Danger, Gaboon, and now preserved in the British Museum:—

	Wing from carpal joint. in.	Tarsus. in.
♂. From the river Danger............	6·4	2
♀. From the river Danger............	7·6	2·3

This Gaboon race is entitled to the specific name of *castanilius* (Bon.); and the type specimen, an adult male, is also in the collection at the British Museum, whither it was transmitted by the late Messrs. Verreaux, who, by some unfortunate accident, labelled it as having been obtained in New Granada, in consequence of which it was so described by the late Prince C. L. Bonaparte in the Rev. de Zoologie for 1853, p. 578, and subsequently figured as an American species by Messrs. Sclater and Salvin at pl. 18 of 'Exotic Ornithology.'

This specimen is described in Mr. Sharpe's Catalogue under the title of *Micrastur castanilius,* the mistaken locality and a somewhat too cursory examination of the scutellations of the tarsus having led to its inadvertent admission by Mr. Sharpe into the genus *Micrastur.*

The specimens figured in Mr. Sharpe's Catalogue under the name of *Astur macroscelides*, are an immature and adult male of the Gaboon race; and the plate should therefore bear the inscription of *castanilius*.

The remaining species of this group is another and, as it seems to me, nearly allied form, also from the Gaboon—*Scelospizias tousseneli*. The type specimen of this species (which is, I believe, at present unique) is preserved in the British Museum, and appears to be in adult plumage; though showing some traces of transverse markings upon the breast, it is much less distinctly barred on that part than either *S. tachiro*, *unduliventer*, or *castanilius*, in which respect it approaches an oriental species, *Astur trinotatus* of Mr. Sharpe's Catalogue, for which I would propose to retain Kaup's subgeneric name of *Erythrospiza*, or, as it might be more properly written, *Erythrospizias*.

This beautiful native of the Celebes resembles the *A. tachiro* group in the white spots which are conspicuous on its central rectrices; but in its adult stage its breast is quite free from transverse bars, and the ferruginous character of its immature dress is entirely different from the corresponding plumage of every species of *Scelospizias*.

The Oceanic and Australian species included by Mr. Sharpe in his genus *Astur* were divided by the late Dr. Kaup into four subgenera—*Erythrospiza* (which, as it seems to me, should be limited to *E. trinotata*, although some other species were included in it by Kaup), *Urospiza*, *Leucospiza*, and *Tachyspiza*.

The term *Urospiza* is applied, under the amended spelling of *Urospizias*, as a generic appellation for the large rufous Hawk of Australia, *Falco radiatus* of Latham*, which Mr. Sharpe very properly treats as forming in itself a distinct genus; but the name of *Uropizias* is not admissible for this purpose, Kaup's type of that genus, given in Mus. Senckenb. (vol. iii. p. 259), being *Falco radiatus* of Temminck, which is the immature plumage of *Astur approximans* of Mr. Sharpe's Catalogue.

I would therefore retain the term of *Urospizias* as a subgeneric name for *Astur approximans* and the following species, which I think may correctly be associated with it, viz. *cruentus* of Gould, *torquatus* of Temminck, *wallacii* of Sharpe, *rufitorques* of Peale, *henicogrammus* of Gray, *griseigularis* of Gray, *muelleri* of Wallace, *sylvestris* of Wallace, *hiogaster* of Müller and Schlegel, *poliocephalus* of Gray, *haplochrous** of Sclater, and *albigularis* of Gray.

---

* I shall have occasion hereafter to refer more at length to this species.

I have nothing to add to Mr. Sharpe's remarks on these species, except that I would observe that *Urospizias henicogrammus*, which is treated as a subspecies of *U. griseigularis*, appears to me to be well entitled to full specific rank, on account of its very peculiar rufescent immature plumage, which, as Mr. Sharpe justly remarks, recalls the corresponding dress of *Erythrospizias trinotatus*.

In the next subgenus, *Leucospizias*, I would include the following species, viz. *novæ hollandiæ*, *leucosomus*, and *cinereus*.

The remaining subgenus, *Tachyspizias*, consists of *Astur soloensis* and *A. cuculoides* of Mr. Sharpe's Catalogue. These are described and figured as distinct species, which they perhaps are, though they certainly appear to merge into each other in a remarkable manner.

Mr. Sharpe gives as the habitat of the first, "China, from Pekin southwards throughout the Malayan peninsula and the archipelago generally to New Guinea;" and of the second, "North China southwards to the Moluccas;" but both forms occur in Java, and the Norwich Museum possesses an adult of each collected in that island by the late Dr. Bernstein, who considered them as both belonging to the same species.

Mr. Sharpe describes the iris in the adult of the darker form as yellow; and an adult female in the Norwich Museum, obtained by Mr. Swinhoe at Amoy, was marked by him as having the iris "orange."

The iris in the paler form is stated to be dark brown; and an adult specimen in the Norwich Museum, brought from

---

* This species was figured in 'The Ibis' for 1860, not in the P. Z. S. for that year, as inadvertently stated in Mr. Sharpe's list of references.

Pekin by Mr. Whitely, is ticketed by him as having a "dark reddish brown" iris.

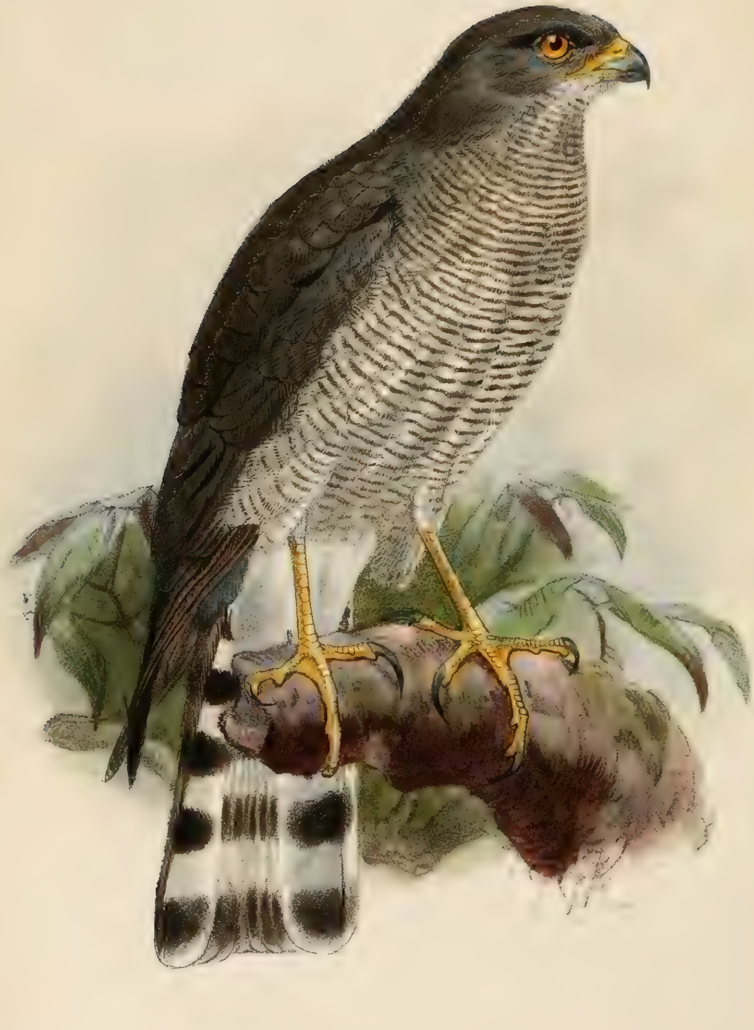
I may add that Mr. Swinhoe, who has observed both in China in a state of nature, considers them to be decidedly distinct, and informs me that the egg of the darker race is always both proportionally more elongated and also actually longer than that of the paler bird, and that the dark colouring with which the egg of the former is stained resembles in its disposition and appearance that on the egg of *Scelospizias badius,* whilst the egg of the latter is marked with dark blotches resembling those upon the egg of *Accipiter nisus*—a difference which is very apparent in the specimens of these eggs which are preserved in Mr. Swinhoe's cabinet, where he was so good as to allow me the opportunity of examining them.

The genus *Astur* in Mr. Sharpe's Catalogue is followed by the curious Madagascar Hawk, *Nisoides moreli,* which Mr. Sharpe admits (and I think correctly) to be sufficiently distinct to constitute a separate genus, as proposed by its first describer, M. Pollen; next to which the genus *Accipiter* is arranged, in which twenty-three species are included: but before proceeding to the consideration of these, I have to describe a species belonging to that genus which has for some years formed part of the collection in the Norwich Museum, but which (through an oversight on my own part) has not hitherto been recognized as new to science, though there seems to be no doubt that it really is so.

Having recently had occasion to examine the series of specimens of *Scelospizias polyzonoides* in the Norwich Museum, I observed amongst them two Hawks which, though resembling that species in coloration and markings, were evidently somewhat larger; and on examining them more closely, I found that they also differed from it in the proportion of the foot, which presented all the characters of the more typical species of the genus *Accipiter*.

Of these two Hawks, one is evidently fully adult, and the other immature, but commencing its change into adult dress; both were obtained by the late Mr. C. J. Andersson—the first

AMERICAN MUSEUM
CENTRAL PARK,
NEW YORK.
OF NATURAL HISTORY.



J. G. Keulemans lith.

M & N Hanhart imp.

ACCIPITER [illegible]

on the river Okavango, in Ovampo Land, on 12th May, 1859, and the second at Elephant's Vley, a short distance further to the south, on the 9th August following*. They were both ticketed by Mr. Andersson as females; but, from the difference in size between them, there is, I think, no doubt that only the immature bird is really a female, and that the adult is a male. Mr. Andersson did not attach any specific name to either specimen; and in the assortment of his collections on their arrival in this country, these birds passed as skins of *Scelospizias polyzonoides*.

The following description of these two specimens and the accompanying plate of the adult (Plate VI.) will probably suffice for the future identification of this species, which, as it was first obtained in Ovampo Land, I propose to designate as *Accipiter ovampensis*.

The adult, which I presume to be a male, bears a remarkable resemblance in the general appearance of its plumage to the adult of *Scelospizias polyzonoides*, from which its markings and coloration only differ in the absence of any rufous tinge from the transverse pectoral and abdominal bands, in the character of the markings on the under surface of the wings, and also in that of the markings on the tail.

The general colour of the upper surface in this specimen is a rather dark ashy grey, paler on the sides of the neck, and with a little white showing towards the base of the feathers on the nape; the upper tail-coverts, which are of the same colour as the back, have also a pure white spot about the middle of each feather, but rather nearer to the base than to the tip.

The upper surfaces of the primaries are greyish brown, barred transversely with darker brown; above the notch the intervals between these dark transverse bars are white on the inner web, as they are throughout the whole length of the feathers on its under surface. On the secondaries and tertiaries there are traces of similar markings, but much less distinct.

---

* These particulars were given on Mr. Andersson's tickets attached to the specimens; but I can find no remarks respecting them in his MS. notes.

The inner lining of the wing is white, with narrow transverse brown bars at small intervals, much resembling the bars on the breast in their character and arrangement.

The upper surface of the tail is crossed with four bars of dark brown, the lowest being terminal, with the exception of a narrow white tip to the rectrices; these dark bars, which are all of nearly equal width, are alternated with other bars of similar width but of a paler brown; and in the centre of each of these paler bars is a pure white spot, including a portion of the shaft of the feather, which is there white also; these spots, which are largest on the upper portion of the tail, and diminish in size as they approach its extremity, occur on all the rectrices.

The underside of the tail shows five dark transverse bars, the intervals between which, including the portions of the feather-shafts which they comprise, are white, as are also the under tail-coverts.

The whole remainder of the undersurface of this specimen is white, with narrow transverse grey bars at small intervals, the bars themselves, and also the intervals between them, being much narrower on the throat than elsewhere.

The immature female is dark brown on all the upper parts which in the adult male are grey; but the feathers of the forehead and of the sides of the head and neck are broadly margined with white; the hindermost tertiaries and a few adjacent feathers of the back are also slightly tinged with rufous, especially at the tip.

The tail has five dark transverse bars on the upper, and six on the under surface, the lowest bar being terminal; in the intermediate paler species the shafts only of the rectrices are white.

The breast shows the appearance of a few adult feathers, resembling those on the breast of the adult male; the remaining plumage of the underparts, which is still immature, is also transversely barred, but the bars are wider apart than in the adult, and slightly sagittate in their arrangement; the feathers on the crop also show a narrow brown shaft-mark; and both on the breast, abdomen, and thighs the white intervals between the transverse marks are slightly tinged with pale brown wherever the immature plumage remains.

The throat is a pure unbroken white, as are also the under tail-coverts, with the exception of a few indistinct traces of dark transverse bars towards their lower extremity.

The comparative length of the primaries in this species is fourth, fifth, third, sixth, second, and first; and the third, fourth, and fifth primaries are rather conspicuously emarginate on the outer as well as on the inner web.

The following are the measurements of the two specimens above described.

	Male. in.	Female. in.
Total length	13·4	15·5
Wing, from carpal joint	9·2	10·4*
Tail	6·5	7·6
Tarsus	1·7	2·1
Culmen, exclusive of cere	·55	·6
Middle toe, s. u.	1·4	1·7
Outer toe, s. u.	·8	·9
Inner toe, s. u.	·6	·8
Hind toe, s. u.	·6	·7

P.S. Since the above notes were written, a third specimen of this Hawk has come to light, which also formed part of one of Mr. Andersson's South-African collections, but unfortunately without any record of the locality where it was obtained. It was marked by Mr. Andersson as a male; but I feel doubtful as to its really being so, its measurements, which are subjoined, being intermediate between those of the two examples previously described.

	in.
Total length	14
Wing from carpal joint	10·2
Tail	7·4
Tarsus	1·75
Culmen, exclusive of cere	·55
Middle toe, s. u.	1·6
Outer toe, s. u.	·9
Inner toe, s. u.	·8
Hind toe, s. u.	·7

This specimen, which is about to be placed in the Norwich Museum, agrees in its general plumage with the immature female described above, but is apparently somewhat younger and consequently less worn and faded; it also shows no signs of beginning to assume the adult plumage, and differs from the immature specimen previously described in having six dark transverse bars on the upper surface of the tail and seven on the under surface, also in having a narrow shaft-mark of dark brown on each feather of the throat.

---

* Allowing ·3 for an abrasion of the tips of the wings.

[To be continued.]

XXXI.—*Additional Notes on the Birds of the Islands of Masafuera and Juan Fernandez.* By OSBERT SALVIN, M.A., F.R.S., &c.

MR. HANBURY BARCLAY has lately placed in my hands for determination an interesting series of bird-skins, brought from Chili by his brother, Mr. Charles Barclay, and collected by the well-known naturalist, Herr Leybold, of Valparaiso. Amongst them are a series of skins from the island of Masafuera, made by an agent of Herr Leybold's. My present notes refer to this portion of the collection; but I hope at a future occasion to make a further communication on the birds of the rest of the series, which contains some of considerable interest.

Our knowledge of the ornis of the islands to which I now refer is summarized in a short paper by Mr. Sclater, published in this Journal (Ibis, 1871, pp. 178–183), since which time the only further reference that has been made to it is by Mr. E. C. Reed, who also communicated some notes on the subject to 'The Ibis' last year (1874, pp. 81–84).

The contents of Herr Leybold's collection are as follows:—

OXYURUS MASAFUERÆ.

Many examples, all agreeing closely with one another, and with the bird figured in 'The Ibis' (1871, t. vii. f. 2).

CINCLODES FUSCUS.

EUSTEPHANUS LEYBOLDI.

Several males and two females. The latter confirm the characters pointed out by Mr. Gould in his description of this species, and show that its distinctness from the nearly allied *E. fernandensis* is quite definable. The male is hardly distinguishable from *E. fernandensis*; but, besides being a little larger, the bright colour of the crown extends further back towards the nape. The female differs in the colouring of the rectrices. All of these except the median pair in *E. fernandensis* are white on their inner webs, whereas in *E. leyboldi* the white on this portion of the feather is restricted to the tip and a narrow margin of the inner edge.

In Mr. Sclater's paper a Buzzard is included as an inhabitant of Mas-afuera under the name of *B. erythronotus*. His authority for so doing rested upon a skin of an immature bird in our collection. Mr. Barclay's series contains adults of this bird, which show that it differs specifically from the continental *B. erythronotus*; and for it I now propose the name

BUTEO EXSUL.

Buteo erythronotus, Scl. Ibis, 1871, p. 182 (nec D'Orb.).

♂ supra obscurè schistaceus; genis paulo pallidioribus; humeris et interscapularibus albo strictè marginatis; alis nigris plumbeo obsolete transfasciatis, secundariorum apicibus albis; subtùs pure albus, abdomine fasciis angustis fere obsoletis notato; subalaribus albis plumbeo-nigro sparse fasciolatis, axillaribus plumbeo-nigris, exterioribus albo transfasciatis: alis intùs albis griseo vermiculatis, in secundariis quasi fasciatis; supracaudalibus lateralibus albis; caudâ albâ, fasciis decem angustis et unâ latâ subapicali nigris notatâ; rostro et unguibus corneis, cerâ et pedibus flavis: long. tota cir. 20 poll., alæ 15, caudæ 8, tarsi 3·5.

♀ mari similis sed major. Long. tot 24 poll., alæ 17, caudæ 9, tarsi 3·8.

Hab. in insulâ Chilianâ "Mas-afuera" dictâ.

Obs. Species distincta; *Buteoni erythronoto* similis, sed coloribus suprà obscurioribus, plumis interscapularibus albo marginatis, genis obscuris nec striatis, dignoscenda; femina interscapulio ei maris simili nec rufo distinguenda.

This Buzzard has its nearest ally in *B. erythronotus,* but, as already stated, may in its adult state be at once distinguished from that species by the darker slaty grey colour of its upper plumage, and also by the female having the back uniformly coloured, just as in the male, the female of *B. ery-*

thronotus being, as its name implies, dark rich red all over the interscapulary region.

The immature bird is not to be distinguished from the young of the continental representative.

Mr. Reed (Ibis, 1874, p. 84) says that he believes this Buzzard to have been attracted to Mas-afuera by the numbers of domestic cats which abound in a wild state in the island. This can hardly be; for, in the first place, the Buzzard, though a powerful bird, is no match for a cat; and then, again, the question arises, on what did the Buzzards live before cats were introduced into the island by the Spaniards? It cannot be that they have assumed their present specific differences from *B. erythronotus* during the short time the cats have been there, probably little more than two centuries. I have little doubt that the food of these birds consists to a great extent, if not entirely, of refuse thrown up by the sea, just as is the case with the Buzzard of the Galapagos Islands, or crustacea, upon which *Buteo borealis* feeds in the island of Socorro.

Besides *B. exsul* two other Hawks occur in Herr Leybold's collection, viz.:—

BUTEO SWAINSONI.

The range of this bird has recently been shown by Mr. Ridgway (N. Am. B. iii. p. 263) and Mr. Sharpe to extend to the region of the La Plata, and even to Patagonia. The single skin (an adult) agrees closely with an example from the latter locality in the British Museum.

CIRCUS MACROPTERUS, Vieill.

Circus macropterus, V.; Scl. & Salv. Nomencl. p. 118.

This bird has a very extensive range in South America. The single specimen sent agrees very well with continental examples.

There are also two specimens of

HÆMATOPUS ATER,

agreeing with Falkland-Island skins. I also find two Petrels, one being the common

DAPTION CAPENSIS.

The other is a species of *Œstrelata*, perhaps allied to *Œ.*

sericea (Less.). Having searched in vain for a name applicable to this bird, I am obliged to bestow a new one upon it, a course I should take with more reluctance did it not possess characters well defined for this intricate group of birds.

ŒSTRELATA EXTERNA, sp. n.

Supra plumbeo-nigra, plumis omnibus intùs albis, collo postico fere albo, plumarum apicibus pallidissime griseis, scapularium et dorsi plumarum marginibus griseis; supracaudalibus lateraliter griseis; fronte, corpore subtùs et paginâ alarum inferiore purè albis; remigibus plumbeo-nigris, intùs nisi in apicibus albis; rectricibus lateralibus obscurè griseis, in pogonii interni dimidio basali albis, omnium apicibus obscurioribus; rostro nigro, tarsis et pedibus flavis, horum dimidio terminali nigro: long. tota 16, alæ 11·5, caudæ 5, tarsi 1·4, rostri a rictu 1·8, dig. med. 1·9.

In order to be sure that the present bird was not referable to that described by Lesson (Man. ii. p. 402) as *Puffinus sericeus,* I sent the single adult specimen to Dr. Oustalet, asking him to compare it with the type of Lesson's description, preserved in the Museum of the Jardin des Plantes. This he most obligingly undertook, and wrote me the following letter. This not only shows that *Œ. externa* must be considered quite distinct from *P. sericeus,* but conclusively points out the proper position of the latter bird to be in the genus *Œstrelata,* and not in *Puffinus,* as placed by Lesson, nor in *Adamastor,* to which genus it was assigned by Bonaparte, to whose determination Dr. Coues assented. The tarsi compressed in *Puffinus,* more "quadrilateral" or Lariform in *Œstrelata,* show characters that have not received the attention due to them. By them these two genera (*Adamastor* resembling *Puffinus*) can be recognized without fail.

Dr. Oustalet's letter is as follows:—

Muséum d'Histoire Naturelle,
Paris, 2 Juin, 1875.

CHER MONSIEUR,—J'ai comparé attentivement l'oiseau que vous m'avez envoyé avec le type du *Puffinus sericeus,* Less., et je me suis convaincu que les deux oiseaux sont complète-

ment différents spécifiquement, mais qu'ils peuvent être rangés dans un même groupe avec *l'Œstrelata diabolica* L'herm.

Le *Puffinus sericeus n'a pas les tarses comprimés,* il les a quadrilatères, comme votre oiseau.

Le *Puffinus sericeus* ne me paraît donc pas un *Puffinus,* mais plutôt une *Œstrelata*; il a les tarses longs de 4 centimètres, et le doigt médian (l'ongle non compris) de 5 cent.; la membrane s'étend jusqu'au milieu des ongles, et comme Bonaparte le dit (Consp. ii. 188), elle est bordée de noirâtre; il n' y a pas, comme le dit Lesson, *une tache noire sur chaque articulation,* mais des taches irrégulières, qui couvrent presque entièrement le doigt externe de chaque patte, s'étendent sur la dernière phalange du doigt médian, sur quelques points du doigt interne et sur le bord de la membrane digitale; le bec est assez long et relativement robuste, *plus robuste que dans votre oiseau, mais absolument de la même forme.*

La tête du *P. sericeus* est entièrement blanche, à l'exception de quelques tiges de plumes brunâtres et d'une tache noirâtre qui s'étend à travers la région oculaire; la base du cou n'est pas blanchâtre comme dans votre exemplaire, elle est d'un gris roussâtre; cette teinte s'étend sur le dos, où elle devient plus foncée; les ailes sont brunes, à reflets grisâtres, et les rémiges d'un brun noirâtre. Le dessous des ailes, *qui est blanc dans votre oiseau,* est d'un brun clair argenté, *moins foncé que le dessus des ailes*; dans le voisinage de l'aisselle il y a cependant quelques plumes presque entièrement blanches; la queue, *qui est d'un gris de fer dans votre oiseau,* est dans le *P. sericeus* d'un gris jaunâtre beaucoup plus clair que la teinte du dos; enfin toutes les parties inférieures sont blanches.

Comme vous le voyez, la description de Lesson et celle de Bonaparte sont, somme toute, assez exactes, et concordent bien avec le signalement donné par Tschudi d'un oiseau de cette espèce tué près 54° lat. sud environ (Journ. für Ornith. 1856, p. 182); mais le signalement donné par ces différents auteurs ne s'applique pas au spécimen que vous m'avez envoyé, et qui a le bec moins fort, les pattes moins robustes, les tarses plus courts, les doigts moins longs, la tête plus foncée, le dos plus gris et moins brunâtre, la queue plus grise, et enfin les ailes un peu moins longues relativement à la queue.

Je rapprocherais plus volontiers votre specimen de quelques individus du Musée de Paris qui ont été rapportés de la Guadeloupe par L'herminier, et dont l'un est peut-être le type du *Procellaria diabolica* de L'herminier. Ces oiseaux ont pour la plupart la tête grisâtre, le dos d'un gris brunâtre, et les ailes dépassant légèrement la queue; mais ils se distinguent de votre spécimen :—1°, par leurs teintes un peu plus foncées, plus brunâtres et moins grises; 2°, par leur bec, dont le crochet est plus rapproché du tube des narines; 3°, par les plumes du bas du dos, voisines des couvertures supérieures de la queue, moins longues et ne cachant pas autant la teinte blanche des tectrices; enfin, 4°, par la bande noire distincte que l'on remarque le long du bord, à la face interne de l'aile.

En résumé donc il n'y a, parmis les oiseaux que j'ai pu voir, *aucun spécimen identique* à votre spécimen, quoique ce dernier me semble du même genre que les *Œstrelata sericea* (*Puff. sericeus* Less.) et les *Œstrelata diabolica* L'herm. (=*Œstrelata hæsitata* Kuhl?). En outre je crois qu'il faut retirer du genre *Adamastor* et éloigner des *Puffinus* le *P. sericeus* de Lesson.

Tels sont, cher Monsieur, les renseignements que je puis vous donner; j'espère qu'ils pourront vous suffire, et je me mets tout à votre disposition pour ceux dont vous pourriez avoir besoin à l'avenir, vous demandant à mon tour la permission de recourir quelquefois à vos lumières. Veuillez agréer, cher Monsieur, l'assurance de mon entier dévouement et mes meilleures salutations.

E. Oustalet.

Compared with *Œ. defilippiana*, Gigl. & Salvad. (Ibis, 1869, p. 63), *Œ. externa* appears to have some resemblance; but, besides the great disparity of size, the description of the former indicates differences in coloration which show that the two species cannot be identical. With *Procellaria maculata*, Tsch. (J. f. Orn. 1856, p. 185) (*Œstrelata maculata*, Coues, Pr. Ac. Phil. 1866, p. 191), the new species would also ap-

pear to be allied; but *Œ. maculata,* with other differential characters, is said to have the whole head white, which must distinguish it from *Œ. externa.* *Œ. maculata* is said by its describer to be found on Juan Fernandez, and to breed on Mas-afuera; but it has not since been recognized*. *Œ. defilippiana* is from the same seas, having been taken during the voyage of the 'Magenta' in lat. 18° 4′ S., long. 79° 35′ W., and between Callao and Valparaiso.

Of *Œ. externa* three specimens were sent, one adult and two young, partly in grey down and partly feathered. The latter are in a specially interesting state, as they show that the young assume the precise plumage of the adult with their first feathers.

Before leaving the Petrels of these islands, I may mention that I have lately acquired specimens, obtained by Mr. Reed on Juan Fernandez, of a species which I make out to belong to that described as *Puffinus creatopus* by Dr. Coues from a single specimen obtained by Dr. Cooper off the coast of California (Proc. Ac. Phil. 1864, p. 131).

Dr. Coues's description is so good that I feel very confident in the determination of the species, notwithstanding the vast distance intervening between Juan Fernandez and the island where the type was obtained. Mr. Reed speaks of having found *Thalassœca glacialoides* in numbers on Juan Fernandez. As his skins belong to *Puffinus creatopus,* possibly it was this bird that he referred to. I have, too, a specimen of *Daption capensis* from the same island.

The following is a revised list of the birds of these two islands:—

1. *Turdus falklandicus,* Juan Fernandez and Mas-afuera.
2. *Anæretes fernandezianus,* Juan Fernandez.
3. *Oxyurus masafueræ,* Mas-afuera.
4. *Cinclodes fuscus,* Mas-afuera.
5. *Eustephanus galeritus,* Juan Fernandez.

---

* It appears to me doubtful, on reading Tschudi's description of this bird, if it is really, as Dr. Coues supposes, referable to the genus *Œstrelata.* Its yellow bill and legs recall *Thalassœca glacialoides*; all *Œstrelatæ* have, so far as I know, the bill black.

6. *Eustephanus fernandensis,* Juan Fernandez.
7. —— *leyboldi,* Mas-afuera.
8. *Asio brachyotus,* Juan Fernandez.
9. *Circus macropterus,* Mas-afuera.
10. *Buteo exsul,* Mas-afuera.
11. —— *swainsoni,* Mas-afuera.
12. *Tinnunculus sparverius,* Juan Fernandez.
13. *Hæmatopus ater,* Mas-afuera.
14. *Daption capensis,* Juan Fernandez and Mas-afuera.
15. *Œstrelata externa,* Mas-afuera.
16. *Puffinus creatopus,* Juan Fernandez.
17. *Spheniscus humboldti,* Juan Fernandez.

Two other species of Petrels are said to frequent these islands, viz. *Thalassœca glacialoides* and *Œstrelata* (?) *maculata*; but of neither have I yet seen examples. Of this family several other members doubtless also occur, such as *Œstrelata sericea, Œ. defilippiana,* and also other species common on the coasts of Chili and Peru.

XXXII.—*Notes on* Rhipidura rufifrons, *with a Description of its Eggs and Nest.* By Edward P. Ramsay, C.M.Z.S. &c.

This showy and interesting species is a regular visitor to the neighbourhood of Sydney. Although I cannot ascertain that it is strictly a migratory bird, like many of our species it roams over the country at stated intervals; thus, near Sydney and Parramatta &c. it makes its appearance in pairs about the end of March, sometimes earlier, sometimes later than the 20th of the month. They frequently remain until the end of September: a few may stay through the summer to breed; but the majority of them either leave us altogether, or disperse themselves so thinly over the country that they are seldom seen; and although I have frequently looked for them, I have never yet found them breeding near Sydney. In the dense brushes and scrubs on the Clarence and Richmond rivers in New South Wales, and on the Mary, Burnett, and other rivers in Queensland, I have occasionally met with them breeding, but was never fortunate enough to secure their eggs. In their habits they closely resemble *R. albiscapa,* and in spreading their tail show the bright rufous rump and upper tail-coverts very conspicuously. They are pleasing and fearless little birds, hopping about you as if they were too common even for a naturalist to molest. I have frequently watched them for hours, and find that they seldom travel far when once having taken up their abode in any favourite part of the scrub, and may be found weeks afterwards, if undisturbed, near the same spot. I noticed this fact with respect to the habits of many of the Australian Flycatchers of this genus, and also with *Ophryzone kaupi,* the habits of which I had, during the summer of 1873–74, numerous opportunities of studying in Northern Queensland.

My esteemed friend and old schoolfellow, Ralph Hargrave, Esq., has been fortunate enough lately to add to his fine collection many beautiful and rare eggs of Australian birds, among them those of the "Cat-bird" (*Ailurœdus smithi*), the Satin Bower-bird (*Ptilonorhynchus holosericeus*), and those of the present species (*Rhipidura rufifrons*), which he has kindly lent me for description.

The nest, Mr. Hargrave remarks, resembles that of *R. motacilloides*; it is smaller, and a more delicate structure, intermediate in size between the nest of that species and that of *R. albiscapa*; it was placed on a small forked twig in a shady part of a dense scrub at Stanwell, near Bulli, in the Illawarra district; it was composed of fine shreds of bark and grasses, intermixed with a quantity of cobweb. The bottom of the nest was produced a little below the twig upon which it was placed, rounded below, but not elongated into a tail, which is always a noticeable feature in the nest of *R. albiscapa.*

The eggs are of a pale cream-colour, zoned at the larger end with spots and dots of light umber, and a few bluish grey dots, which appear beneath the surface of the shell; in fact they resemble miniature eggs of *R. motacilloides,* although quite distinct from the eggs of that species.

Length ·7 inch, breadth ·55 inch.

XXXIII.—*A few stray Notes on African Birds.*

By Captain G. E. Shelley, F.R.G.S.

In the British Museum there is a specimen of *Caprimulgus* which I received from Accra, West Africa, and which appears to be new. It belongs to the same group as *C. natalensis*, Smith, and *C. fulviventris*, Hartl., from which it may be distinguished by its general ashy brown plumage, and especially by the colouring of the pectoral band, and differs, in my opinion, more from *C. fulviventris* than that bird does from *C. natalensis*. In such a complicated group as the Goatsuckers, it is hard to say if these local varieties are of real specific value; I shall therefore name this bird, after the locality from whence the type was procured,

Caprimulgus accræ, n. sp.

Most nearly allied to *C. fulviventris*, Hartl., from which it differs in the general ashy, not rufous-brown plumage of the head, back, scapulars, upper surface of the wings, tail, and pectoral band. The tail has much less white, that colour being confined to the outer web and ·7 inch of the tip of the outer feather and to ·2 of the next one. Above ashy brown with large black triangular centres to the feathers, down the middle of the crown and of the scapulars (as in *C. natalensis* and *C. fulviventris*); sides of the crown pale ashy brown, not shaded with rufous. Upper surface of wing similarly marked to those of the two above-mentioned species; but the coverts and secondaries are ashy, like the back. The undersurface of the wing is identical in the three species. Collar barely perceptible on the back of the neck; a few of the feathers on the sides of the neck are identically the same in the three species (black, broadly edged with buff). The pectoral band dark brown, the feathers finely pencilled and barred or freckled with ashy white, with partially defined white bars or spots at the ends of the feathers. In the other two species the pectoral band is dark brown, nearly black, with broad distinct buff bars and edges, best defined in *C. fulviventris*, and more interrupted and with black borders forming the buff into rather bold spots in *C. natalensis*. In all three species the abdomen and under tail-coverts are of a similar rufous buff.

The comparative dimensions of the three species are shown by the following table: *a.* Type of *C. accræ*; *b.* Type of *C. fulviventris,* Angola (*Monteiro*); *c.* Gaboon (*Ansell*); *d.* ♂; *e.* ♀, *C. natalen-sis,* Natal (*Ayres*).

	Length. in.	Wing. in.	Tarsus. in.	Tail. in.	Culmen. in.
a.	8·3	5·8	·7	4·35	·45
b.	8·3	6	·7	4·2	
c.	7·3	5·6	·7	3·8	
d.	8·4	6·3	·85	4·4	
e.	8·1	6·1	·85	3·9	

NEODREPANIS CORUSCANS, Sharpe, P. Z. S. 1875, p. 76, ♀.

Mr. Sharpe based the characters for his genus *Neodropanis* upon the female bird. From the more recent discovery of the male (a good specimen of which is in my collection) we may add to these generic characters. In the male there are large wattles round the eyes, covering the greater portion of the sides of the head. The sexes are otherwise very similar in plumage.

The bare wattled skin on the sides of the head appears to be grey; but this is probably of a blue colour in life.

DRYMŒCA NATALENSIS, SMITH.

The specimens sent me from Pinetown, Natal, by Mr. T. L. Ayres, of the true *D. natalensis,* Smith, differ very considerably in their measurements, but are perfectly similar in plumage. They differ considerably in the shade of colouring of the upper parts from a specimen of *D. curvirostris,* Transvaal (Ayres), but very nearly approach in colour to some of my specimens of *D. fortirostris* from the Gold Coast, which birds, however, agree entirely with *D. curvirostris,* in colour, markings, and measurements. I have long considered *D. fortirostris* and *D. curvirostris* synonymous; and I believe *D. natalensis* to be the same species in pale plumage.

For comparison I give the following measurements of twelve specimens:—*a, b, c,* ♀. Pinetown (*T. L. Ayres*); *d.* Maritzberg (*Buckley*); *e.* Transvaal (*Ayres*); *f, g, h, i. j, k, l.* Gold Coast (*Shelley & Buckley*).

	Culmen. in.	Wing. in.	Tarsus. in.	Tail. in.
a.	·55	2·9	1·20	3
b.	·55	2·9	1·20	3
c.	·50	2·5	1·05	2·7
d.	·55	2·7	1·15	3·1
e.	·55	2·9	1·15	2·6
f.	·50	2·7	1·10	2·4
g.	·50	2·6	1·05	2·1
h.	·50	2·7	1·10	2·4
i.	·45	2·2	·95	2
j.	·50	2·7	1·10	2·3
k.	·55	2·5	1·10	2·3
l.	·45	2·2	·95	2·3

The form of the wings and the proportional lengths of the primaries are identically the same in all.

The undersurface of the body is similar in all, excepting in *d*, which has those parts strongly washed with sulphur-yellow.

The colouring of the upper parts is the same in *a, b, c, d, f,* and *l*, but darker and more ashy in the others. In *i* it is just intermediate between the darker and the paler forms.

The seven Gold-Coast specimens undoubtedly belong to one species, which Sir W. Jardine, having compared with his *D. fortirostris,* kindly wrote and told me were identical with that bird.

The Transvaal *D. curvirostris* is identical in plumage with specimen *j* from the Gold Coast, but differs very slightly in measurements.

The Pinetown *D. natalensis* is identical in plumage with *f*, which is intermediate in its dimensions between *b* and *c*.

I have thus come to the conclusion that all these specimens belong to one species, which has therefore the following synonymy:—

DRYMŒCA NATALENSIS, Smith, Ill. Zool. S. Afr. pl. 80 (1849).

Drymoica curvirostris, Sundev. Oefv. k. Vet. Ak. Förh. Stockh. vii. p. 104 (1850).

Drymoica fortirostris, Jard. Contr. Orn. 1852, p. 60.

LANIUS BADIUS, Hartl. Journ. f. Orn. ii. 1854, p. 100 (descr. orig.). ♂ adult, Gold Coast. Type in Brem. Mus.

Lanius rufus, part., Hart. Orn. W. Afr. p. 103, note (1857).

Lanius auriculatus, Shelley & Buckley, Ibis, 1872, p. 292 (nec Müll.).

Hab. Guinea.

This is undoubtedly a good species, easily distinguished from *L. auriculatus*, Müll., by the absence of white on the primaries. Dr. Hartlaub's original description is very clear. The measurements of two specimens, collected by myself between Accra and Aguapim, give the following result:—

	Culmen. in.	Wing. in.	Tarsus. in.
a, adult	·65	4·2	·95
b, juv.	·60	3·9	1

This is evidently a rare species in collections, and has not to my knowledge been met with elsewhere than on the Guinea coast. Of the numerous specimens of Woodchat Shrikes I have seen from Northern Africa and from Senegal, all are undoubtedly *L. auriculatus*, Müll.

ÆGIALITIS INDICA (Less.).

Ægialitis tricollaris, Shelley & Buckley, Ibis, 1872, p. 293. Cape-Coast Castle.

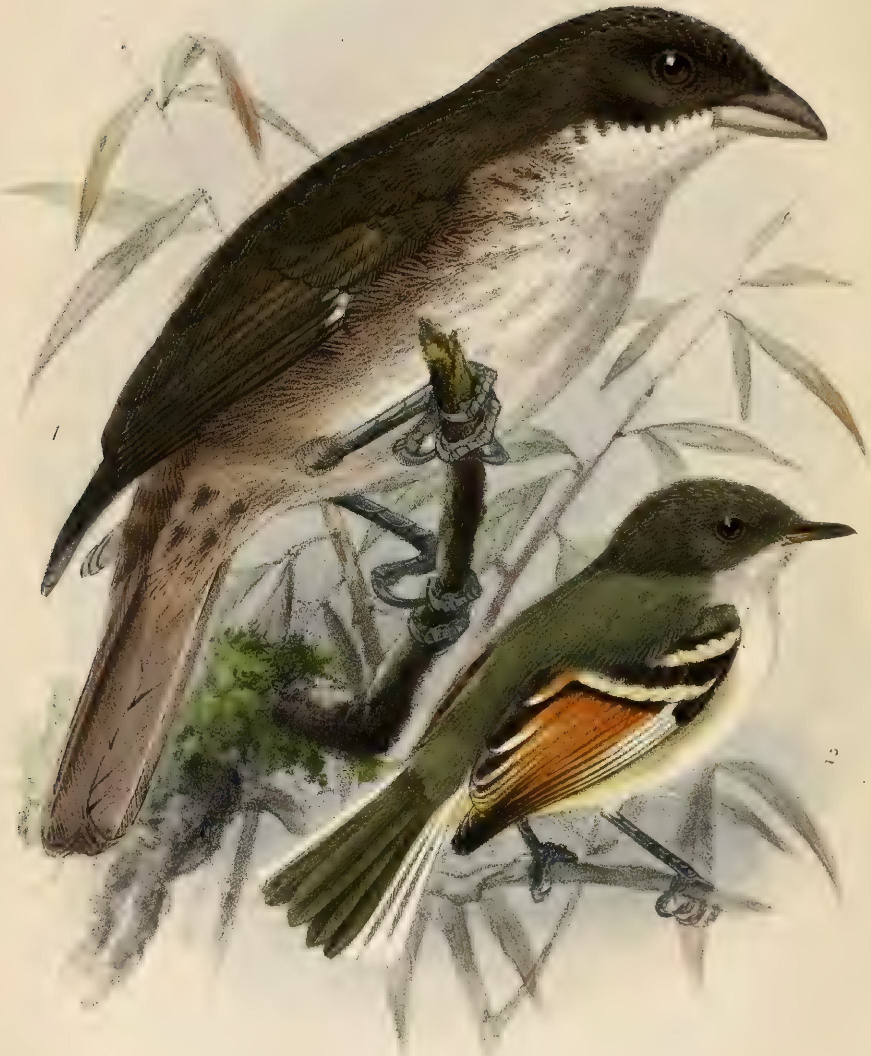
Hab. Fantee.

I am able now for the first time to record the true locality of this species. Lesson's very inappropriate name, *indica*, given to it from his mistaken notion that it came from India, is, no doubt, the reason that, up to the present time, the type has been considered unique. The specimen collected at Elmina by Weiss, in Mus. Hamb., as mentioned by Dr. Hartlaub (Orn. W.Afr. p. 217), I think, may very possibly prove to be another example of this species.

The Cape-Coast specimen now before me, is rather larger than *Æ. tricollaris*, Vieill., has the tarsus very considerably longer, has no white forehead, and has on the outer tail-feathers an additional dark bar. The eyelids and legs were, when fresh, of a clear pink, and I believe the base of the bill was also of that colour; but unfortunately no notes were made to that effect at the time. The irides were dark brown.

The Cape-Coast specimen here referred to was shot by Mr.

AMERICAN MUSEUM
CENTRAL PARK,
NEW YORK.
OF NATURAL HISTORY.



J. G. Keulemans lith.

M & N Hanhart imp.

Fig. 1. CHLOROSPINGUS? SPECULIFERUS.

Fig. 2. SERPOPHAGA LEUCURA

T. E. Buckley in some rushy ground on the 8th Feb., 1872, and was, I believe, the only specimen we saw. Later, when we met with the true *tricollaris,* Vieill., in South Africa, both Mr. Buckley and myself came to the conclusion that our Fantee bird was distinct.

Mr. J. E. Harting most generously lent me his valuable notes which he had made from the type specimen of Lesson's *indica,* which at once enabled me to assign that name to the Fantee bird. I trust that Mr. Harting will give some further details respecting this species in another of his exhaustive papers on rare or little-known Limicolæ.

XXXIV.—*Descriptions of five new Species of American Birds.*

By George N. Lawrence.

(Plate IX.*)

Chlorospingus ? speculiferus. Plate IX. fig. 1.

Entire upper plumage and sides of the head olive-brown; the feathers of the crown have their centres dark brown with their margins greyish; the two central tail-feathers are coloured like the back, the others are light reddish brown and are closely crossed with nearly obsolete darker bars; quill-feathers dark brown, first edged with grey on the outer primaries, the outer webs of the fourth, fifth, and sixth primaries are marked near their bases with white, partly concealed by the wing-coverts, the portion beyond the coverts appearing as a small triangular spot; the under plumage is greyish white, and has a somewhat mottled appearance, owing to the darker bases of the feathers showing a little; the sides are dusky, with a tinge of rufous; under tail-coverts light rufous, with dusky centres; upper mandible dark brown, the under pale brownish white; tarsi and toes brownish black.

Length $6\frac{1}{2}$ inches, wing $3\frac{1}{2}$, tail $2\frac{3}{4}$, bill $\frac{5}{8}$, tarsus $\frac{7}{8}$.

Hab. Porto Rico. Discovered by Dr. J. Gundlach.

Type in National Museum, Washington, U. S.

Remarks. This is a peculiar-looking bird, and I am not sure

---

[*] This Plate will be issued with the October Number.—Ed.]

that the true position has been assigned to it*: it is larger than all other species of *Chlorospingus*; but the bill agrees closely in form with those of some members of the genus, especially that of *C. flavigularis*.

CHLOROSPINGUS NIGRIFRONS.

Front, lores, and sides of the head black; the feathers of the crown and occiput are yellowish green, with blackish centres; a white stripe extends from the bill, over the eye, and along the crown as far as upon a line with the hind neck; there is also a white mark upon the lower eyelid; upper plumage with the smaller and middle wing-coverts yellowish green, the larger wing-coverts have their inner webs black, their outer greenish yellow; quills and tail-feathers blackish brown, with their outer margins the colour of the back; spurious wing brownish black; entire under plumage bright yellow; under wing-coverts of a paler yellow; inner margins of quills white; upper mandible black, the under brownish horn-colour; tarsi and toes dark brown.

Length 5 inches, wing $2\frac{7}{8}$, tail $2\frac{5}{8}$, bill $\frac{7}{16}$, tarsi $\frac{3}{4}$.

Hab. Ecuador.

Closely allied to *C. superciliaris*, from which it differs in having the forehead and crown blackish instead of grey.

SERPOPHAGA LEUCURA. Plate IX. fig. 2.

Crown dusky cinereous; hind neck and back brownish olive, with a greenish wash on the the lower back and rump; outer three tail-feathers white, the outermost entirely of that colour, the next with the outer margin of the outer web pale brown for its terminal half, the third has the entire outer web pale brown; the other tail-feathers are light slaty brown, some of them tipped with white; wings blackish brown, the outer primaries margined with white, the inner, with the secondaries and tertiaries, have bright rufous margins, and their ends bordered with white; the smaller wing-coverts are coloured like the back, the middle and greater coverts are black, broadly ending with pale rufous-white, forming two bars across the wings; spurious wing black; the under wing-coverts are very pale yellow; inner margins of quills white; under plumage greyish white on the neck and breast, becoming of a very pale yellow on the abdomen and under tail-coverts; bill and tarsi brownish black.

---

* [A new genus should, we think, be made to receive this bird.—ED.]

Length 3¾ inches, wing 2, tail 1⅞, bill $\frac{5}{16}$, tarsi ⅝.

Hab. Ecuador.

Allied to *Serpophaga pœcilocerca*, Scl. & Salv., from which it differs in having the margins of the secondaries and inner primaries rufous instead of yellowish olive, in the rump being uniformly coloured with the back, instead of being white, and in having the outer rectrices wholly white, these being olivaceous in the allied species on the outer web.

ORCHILUS ATRICAPILLUS.

Todirostrum ecaudatum, Lawr. (nec Lafr.) Ann. Lyc. N. Y. ix. p. 110.

Male. The entire crown is black; the lores are also black, except a white mark extending from the bill to the eye on each side, separating them from the black crown; eyelids white; under the eye blackish ash; the colour on the sides of the head behind the eye, extending to the hind neck and on the upper part of the back, is of a clear bluish-cinereous; breast also cinereous, but lighter in colour; throat greyish white; abdomen pale yellow; flanks and thighs blackish ash; under wing-coverts pale yellow; back, rump, and upper tail-coverts yellowish green; wings black, the primaries narrowly edged with olive-green, the secondaries and wing-coverts conspicuously margined with yellow of a greenish tinge; tail black, the feathers with margins the colour of the back; bill black; tarsi and toes very pale flesh-colour.

First primary shorter than the fifth, third and fourth equal and longest.

Length 2¾ inches, wing 1$\frac{7}{16}$, tail ⅝, bill $\frac{7}{16}$, tarsus ½.

Hab. Costa Rica, Angostura (*J. Carmiol*), and Volcan de Irazu (*J. Zeledon*, under *Prof. W. M. Gabb*).

Remarks. As will be seen in my Catalogue of birds found n Costa Rica (*l. c.*), I referred this species to *Todirostrum ecaudatum*. When Mr. Salvin was here last year, in going over my collection he noticed the black crown of this bird, and thought it differed from a specimen of *Orchilus ecaudatus* in his possession. Since his return home I wrote, calling his attention to it, and requesting him to inform me if he thought the two differed; he replied as follows:—"I have looked at my specimen of *O. ecaudatus* (said to be from Bolivia), and find it has a grey head, as I imagined; this being the case, the Costa-Rica bird is undescribed."

In referring it to *O. ecaudatus*, I was misled by its general resemblance to that species, and especially by its abnormally short tail, in which character they agree. On a hasty comparison with D'Orbigny's figure they look much alike; but on comparing with the figure more carefully, aided by his description, the two birds are shown to be clearly distinct. Besides some minor differences, the most marked are the black crown of the present species, the white line through the lores, the ash-colour on the sides of the head, on the hind neck, and on the breast, and in its clear yellow abdomen. In *O. ecaudatus* the crown is cinereous, there is no white in the lores, the hind neck is uniform in colour with the back, and "the underparts are whitish, tinged with yellowish green on the belly and flanks."

The specimen from Angostura, collected by Mr. J. Carmiol, is not in very good condition; but another, in a collection from Prof. Gabb, of the Talamanca Expedition, has aided me in making out some of the characters.

Both specimens belong to the National Museum, Washington, U. S.

EMPIDONAX NANUS.

Above dull greenish olive, darker on the crown, and brighter on the rump; tail dark brown, the outer web of the lateral feather pale fulvous; smaller wing-coverts the colour of the back; the middle and larger coverts are brownish black, ending with white, forming two bars across the wings; the quill feathers are dark brown, the third and fourth primaries are narrowly edged with greyish white, the inner quills just perceptibly edged with light rufous; under lining of wings very pale yellow; throat greyish white; breast, abdomen, and under tail-coverts pale whitish fulvous; thighs light brown; upper mandible brown, the under whitish horn-colour, dusky on the sides; tarsi and toes brownish black.

The first primary is abnormally short, measuring but $1\frac{5}{16}$ inch, third quill longest; tail emarginate.

Length $4\frac{5}{8}$ inches, wing $2\frac{3}{16}$, tail 2, bill $\frac{3}{8}$, tarsus $\frac{11}{16}$.

Hab. St. Domingo: obtained by Prof. W. M. Gabb.

Type in National Museum, Washington, U. S.

Remarks. This appears to be the smallest of the genus yet described. The colouring of the upper plumage is most like that of *E. hammondi*; but it differs in having the breast devoid of ashy colouring, and the abdomen, and especially the under tail-coverts, having a decided fulvous tinge; it wants the white margins on the smaller quills, so conspicuous in most of its allies.

XXXV.—*Letters, Announcements, &c.*

The following letters, addressed "To the Editor of 'The Ibis,'" have been received:—

Sir,—Since publishing the notes on Severtzoff's 'Turkestanskie Jevotnie,' in the January number of 'The Ibis,' I have had an opportunity of examining specimens of the bird referred to by Severtzoff under the name of *Carduelis orientalis*, Eversm. Mr. Gould possesses examples from Turkestan, sent to him by the Russian collectors, labelled *C. orientalis*; and on comparing these with examples of *Carduelis caniceps*, Vig., also in Mr. Gould's collection, I can detect no specific difference: therefore the name *orientalis*, Eversm., will sink into a synonym of *Carduelis caniceps*.

Yours &c.,
H. E. Dresser.

6 Tenterden Street, W.
June 4th, 1875.

Sir,—I have lately made a small collection of birds in Sind, the greater portion being from the hill-ranges on the western frontier of British territory and the desert or semidesert plains at their base. I have been able to add but very few forms to Mr. Hume's list of the Sind avifauna, published in 'Stray Feathers' (vol. i. pp. 91–289); but one specimen, which was shot by a native collector, and brought to me in the flesh, is, I think, a male of *Hypocolius ampelinus*, Hartlaub, figured and described by Heuglin in 'The Ibis' for 1868 (p. 181, Pl. V.).

So far as I am aware, this species has hitherto only been found in Abyssinia, where it can scarcely be common, as neither Mr. Jesse nor I obtained it; and it is a very interesting addition to the birds of Western India.

My specimen is, above, of a purer grey than those described by Heuglin; the crown of the head is of the same colour as the back towards the nape, and has an isabelline tinge only towards the forehead, even there being very much darker than the chin and throat are. But these differences are very possibly due to the state of the plumage, and I greatly doubt if they are of specific value. The first long primary is grey towards the tip, not white; and the second has a large grey spot on the terminal portion of the inner web. This is not mentioned by Heuglin, who describes all the primaries as having white tips.

I had not the good fortune to see the bird alive; but the man who shot it told me that he found it alone on a stony and barren hill-side. The stomach was very muscular; and the contents consisted entirely of *Zizyphus* fruits. These facts, and the complete absence of vibrissæ at the base of the bill, suffice, I think, to show that Heuglin's view of the affinities of this bird are untenable. He considers that it belongs to the *Campephaginæ*. Mr. Gray, in his 'Hand-list, even placed it in the *Laniidæ*, close to *Lanius* itself. Bonaparte, the original describer of the genus, assigned it to the *Ampelidæ*; and this position appears more probable than that adopted by Heuglin and Gray, though I cannot help feeling some doubts as to its correctness.

Yours &c.,
W. T. Blanford.

Calcutta, May 14th, 1875.

Sir,—The generic name of the Kagu is variously written (*Rhinochetus, Rhynochætus, Rhynochetos,* &c.), the general supposition being that the latter part of the word is derived from *χαιτὴ, coma.* On referring to the Rev. Zool. 1860, p. 439, where the genus was instituted by J. Verreaux and O. des Murs, we find the original writing was *Rhynochetos.* The derivation is not stated, but from the context there can be little doubt that the term was intended to have been compounded from ῥίς, ῥινὸς, *nasus,* and ὀχετὸς, *canalis,* in allusion to the channelled nostrils. It should therefore be orthographically written *Rhinochetus,* as in the Revised Cat. of Vert. Zool. Soc. London, p. 305, and generally in P. Z. S.

Yours &c.,

P. L. Sclater.

11 Hanover Square, London.
June 1875.

Mr. R. B. Sharpe has sent us the following extracts from a letter addressed to him by Baron A. von Hügel, who left England last year on a cruise to Australia and the islands of the Pacific:—

Christchurch, New Zealand,
Feb. 11th, 1875.

On landing at Melbourne, which I did after a very pleasant eighty-seven days' voyage, I at once began to prepare for my expedition to N.W. Australia, and intended leaving for King George's Sound by the first mail. But I was stopped by a report that got abroad of H.M.S. 'Pearl' going on a cruise to New Guinea. I had a letter to the commander (Goodenough), and I at once wrote to him at Sidney to ask for a berth on board his ship. But he was, unfortunately, away, treating with the "Fijis," and the result was that I had to wait some six weeks for an answer. In the mean time I employed my time as best I could in Victoria. I obtained some sixty skins during a fortnight's trip to the Dividing Range, and got some good specimens of *Menura* and five nests . . . . . At last, however, the answer came, an exceedingly kind letter, but stating, to my no small disappointment, that

Capt. Goodenough had as yet received no orders, and that he thought it very unlikely that the 'Pearl' would be sent to New Guinea. Of course it was no use waiting on a chance; and I was just beginning to think about N.W. Australia again, when I received a letter from the Rev. Mr. Brown, in which he informed me that he was ordered to take charge of a mission-trip to the Pacific and New Guinea, where they were anxious to establish missionaries on New Ireland, New Britain, and the N.E. mainland. He thought that this might suit me as well as the 'Pearl' expedition, which he had heard I was anxious to join, and that, if this was the case, I should apply to the Sidney Mission Board and make my proposal. Afterwards I met Mr. Brown in Melbourne, and had a long talk with him over the matter. He said that he thought that there would not be the slightest difficulty in the matter, but that I should have to wait till their ship 'John Wesley' had arrived in Sydney from Fiji, as somebody or other was on board who had to be asked in the matter under consideration. Another delay before work; but I thought that I would not give up New Guinea and the Isles without a try, and so I decided to wait a second time. There would be about two months' time; so I made up my mind to have a look through New Zealand, and two days after found me on board the 'Albion,' and four more in the South Island. This will explain why my letter is dated from New Zealand. As I am anxious to see as much of the country as I possibly can, I have not been able to devote all my time to collecting; and taking this into consideration, I have had very fair success. One thing I can boast of already is having been in the midst of the Kakapoes: but I did not accomplish this without some trouble; for the *Stringops*, unfortunately, is driven yearly further and further up country by the settlers, and now it is only met with in the most lonely mountain-districts. But I hardly think that any trouble and labour would be too great to see the bird as I saw it, at home, and, what is even better, procure a fine series of specimens. My trip was undertaken from Invercargill, and consisted of forty miles by rail, twenty-four in a coach, and some fifty more on horseback, with finally a ten-mile row up and across Lake Te-Anare. This brought me into the midst of the Parrots. The whole ground in the bush, which is covered with thick moss, is honey-combed with their burrows—which emit the strong scent, a sort of greasy essence of Parrot-bouquet. The entrance to each—as in fact is the whole ground—is strewn with their excrement, so as almost to make one believe that a flock of sheep had been grazing there. I had an old Scotch shepherd and his dog with me; and they both proved very useful. The latter caught the birds very cleverly by the back, and invariably brought them already killed to us with their feathers in perfect order; but some we lost through his killing them in the bush instead of on the open tract of bracken where we were posted, and then feeding on them quietly before we could make out his whereabouts. The note of the *Stringops* is very peculiar, quite unlike that of a bird. I think it is when feeding that they indulge in a series of the most perfect porcine squalls and grunts. It is really as like a young pig as any thing can be. Then their other note, which I think answers more to a call or warning, is a very loud aspirated scream, with a sort of guttural sound mixed in with it, almost impossible to describe. Then, when pursued and caught by the dog, it emits a low harsh sort of croak; but some were perfectly silent to the last. However, I have not time now to give you a history of these most extraordinary birds, all I will now say is, that my notes hardly agree with Buller's.

The food I found to consist of the bracken (*Pteris aquilina*), both frond-tips and roots, but chiefly the former. I examined six; and all were *crammed* with it; but what surprised me much was to find parts of two moderate-sized *lizards* in the gizzard of one old male. I think this is quite a new fact in the *Stringops* life-history.

But now to other business. In Invercargill I was very fortunate in procuring good things. I got two specimens of a *Gallinago* there, which I thought interesting enough to send to you. I packed them up and left them in Capt. Hutton's charge at Dunedin, to be forwarded by first mail. As you will see, the one is from the Snares (S. of Stewart Isle); and after comparing it with specimens from the Chatham Isles in the Otago Museum, I have not the slightest doubt that the two are identical. But the Snipe from the Auckland Isles seems to me different in size and colouring . . . . . It struck me at the time that after all there might be differences between *Gallinago aucklandica* and *G. pusilla*, which I believe are at present considered synonymous.

But the best bird I have got (and that, I think you will admit, is a good thing) is a *Mergus* from the Auckland Isles.

I procured a pair of Mergansers with a few other skins in Invercargill, from a man who had just returned from a surveying trip to the islands. He had not even turned the skin after taking it off the body; but as soon as I saw the back through the opening, and felt the beak through the skin of the neck, I knew what I had.

By next mail (that is, as soon as I have unpacked my boxes in Melbourne) I will send you the exact measurements and descriptions of my birds. I am sorry not to be able to do so now; but I have had not a moment's time. However, I have compared the *Mergus* with the original description of *Mergus australis* in the 'Voyage of the Astrolabe;' from it I judge that either the description is a very poor one, or my two birds must belong to a new species. But what agrees well, and made me first think they were an immature pair of birds, is the lower surface of the body, which, instead of being white, as in *M. serrator*, is of a dull slaty grey, variegated with white bands (the feathers being edged with white).

The whole plumage is very dark, approaching black on the back, the crest well formed, and the size, I fancy, considerably smaller than the British Red-breasted Merganser (*M. serrator*). From the great difference in size and brightness of colouring in bill and feet, I deem them to be male and female; but in plumage there is little difference. The birds were killed the latter end of November last; and I procured them on the 27th of the following month. But my luck with Auckland things did not end here; for I have received a Rail killed on that island by the unfortunate Capt. Musgrave of the 'Grafton.' As soon as I got the bird I was struck with its resemblance to one of the Rallidæ I was acquainted with, but for some time could not make out which. At last it struck me that it must be the Australian *Rallus brachypus*; and on comparing the Auckland with the Australian bird, I found them to agree very closely, though the colouring seemed different; but as the Canterbury-Museum specimen appears to be very old and faded, it is impossible to judge. It is curious, my falling in with so many things from the Auckland Isles, and especially a "Rail," now that I am just working at them. I shall be able to determine if my Rail is *Rallus brachipus* or new as soon as I get to Melbourne, there being a good series there. At all events it is the first Rail known to have been procured in the group . . . . .

Of New-Zealand things I have got a very fair collection—some 300 specimens already. *Ocydromus* I have of course gone in for, and have a lot of notes about it. I don't believe in more than three good species—*O. australis* (with endless varieties), *O. fuscus*, and *O. earli*. The last two are difficult to procure, although I shall doubtless get a series of the latter in the North Island; but of *O. australis* one could get a shipload in a very short time. I have got a splendid series, showing every age from embryo to adult, and varieties to perfection.

Now with regard to my plans, my route will be as follows:—

North Island, New Zealand; Sidney (*en route* to Melbourne); Melbourne, to pack up things. Leave Sidney in April. The 'John Wesley' touches at Fiji, Rotumah, Samoa (hurrah for *Didunculus*!), Friendly, and other groups. Then goes to New Ireland and New Britain, and from there to the New-Guinea mainland. She will probably return by New Hebrides &c. The trip is to take not less than six months; so that I shall have good time for work. Of course I shall engage an assistant to go with me. After New Guinea (or should the expedition come to grief in any way) I am straight off to N. Australia, beginning at Nicol Bay; but I wont forget your two Hawks at King George's Sound *en route*. After Australia I think I shall try work in N.E. Borneo, and then go to Japan and work the interior some time; and then I shall see what is to be done. I do not care to look too far into the future; with to-morrow one has quite enough to do, without troubling one's head with the thought of weeks, and months, and years.

On the 15th I am off, Kivi-hunting at Hokitika; and I hope I may get a good many *Apteryx oweni,* if not *A. australis.*

A. von Hügel.

The Marquis Doria, writing to Mr. Sclater from Genoa (June 10th), says that his last letters from L. M. d'Albertis are from Yule Island, near Mously Bay, on the S.E. coast of New Guinea, where he proposes to establish his headquarters. His health was excellent. There can be little doubt therefore that this energetic naturalist will soon make known to us the hitherto unexplored fauna of this part of New Guinea.

Since our last Number was issued several important works on ornithology have been published. Of these we hope to give an account in our next Number. Mr. Gould has completed a new part of 'The Birds of Asia.' Colonel Irby's 'Ornithology of the Straits of Gibraltar' is finished; and the first part of the second edition of Layard's 'Birds of South Africa,' announced some time ago, has also reached us. From abroad we have received Dr. Coues's important work on the birds of the north-west, being an account of the ornithology of the region drained by the Missouri river and its tributaries. The last named contains a vast amount of fresh information relating to North-American birds; but we must defer till October next a more lengthened account of it.

THE IBIS.

THIRD SERIES.

No. XX. OCTOBER 1875.

XXXVI.—*On the Birds of the South-eastern Subdivision of Southern Ceylon.* By W. Vincent Legge, Lieut. R.A.

[Continued from page 290, and concluded.)

60. Drymocataphus fuscicapillus, Blyth.

This Babbler is not found in the dry maritime region. I did not meet with it until I reached the Wellaway Korle; but I may have often passed it over: as it affects only particular localities, it may well escape observation, though it may be frequent in a district. I found it in some of the jungles near the Kirinde Ganga and its affluents. Its favourite resorts in the south-west are the damp bamboo jungle and low scrubby woods with which much of that part of the country is covered. Its curious note or whistle, referred to (Ibis, 1874, p. 19), is most frequently uttered in the early morning after rain, its usual voice in the day-time being a pretty little warble, very unlike the whistle, which is often heard in dense jungle, particularly when the bird is disturbed.

61. Pomatorhinus melanurus, Blyth.

I only heard the call of this bird once or twice, in the forest along the rivers of the interior. It is common enough in the other subdivision of the south.

62. **Criniger icterICUS**, Strickland.

63. **Rubigula melanictera** (Gm.).

Both of these Bulbuls occur in the forests along the Kirinde Ganga, in the Wellaway Korle.

64. **Cittocincla macrura** (Gm.).

Very abundant in the maritime scrubs from Hambantotta up the coast, and numerous likewise in parts of the Wellaway Korle.

65. **Thamnobia fulicata** (Linn.).

A typical species of the "north country," and one of the commonest birds along the sea-board; likewise in suitable places in the interior. It replaces to a great extent *Copsychus saularis* in this district.

66. **Acrocephalus stentorius**, Hempr. & Ehr.

Acrocephalus brunnescens, Jerdon, Birds of India, vol. ii. p. 154 (*vide* "Additions to Ceylon Avifauna," Str. Feathers, vol. i. p. 488).

The occurrence of this migratory Warbler at Hambantotta in the month of July is remarkable, and can only lead to the inference that it remained behind as a straggler, as other migrants occasionally do. My example was a male, with the testes much developed, as if it were breeding. I was unable, however, to find the female, although the reed-bed was of small extent; and I am of opinion that my bird was the sole tenant of the tank where I shot it. It is worthy of remark that my Jaffna example, published *loc. cit.*, and shot in January, was in company with another of its species, which I failed to procure, and appeared, from the developed state of the testes, to be breeding. Mr. Hume, in his "Rough Draft of Nests and Eggs of Indian Birds," gives evidence of its breeding in Cashmere in June.

67. **Drymoipus inornatus** (Sykes).

In suitable localities this Warbler occurs, but it is rarer than in the western districts. It is common in grassy fields about

Colombo, where I took many of their eggs. There is no mistaking this species for *D. validus* or *D. jerdoni*; for it is not more than three quarters of the size of these. There is likewise no mistaking its nest for that of *D. jerdoni.* My identifications, therefore, quoted by Mr. Holdsworth (P. Z. S. 1872, p. 456), must undoubtedly be taken to refer to this bird; and I do not see how that gentleman could have overlooked it in the Colombo district. Two low-country examples in my collection, both males, have the wings exactly two inches long; but an up-country specimen, shot in the Knuckles coffee-estate district, at 2500 feet elevation, and which was so large that I sent it home for identification, has the wing 2·1.

68. DRYMOIPUS VALIDUS, Blyth.

Inhabits the scrubs of the coast-region and suitable localities in the interior. I have no doubt *D. jerdoni* is especially common; but I did not procure specimens. My *D. validus* from this part corresponds exactly with specimens from Colombo, identified as such by Lord Walden. Mr. Holdsworth is in error concerning my not getting it at Colombo (*vide* P. Z. S. 1872, p. 457); most of my birds from that district were this species*. The bills of four males now before me range between ·52 and ·57 inch at front.

69. PRINIA SOCIALIS, Sykes.

I observed this species here and there in jungle-clearings in the Wellaway Korle; it is nowhere a numerous bird in this island.

70. PRINIA HODGSONI, Blyth, "Additions to Ceylon Avifauna," Str. Feathers, vol. iii. p. 203.

This little *Prinia*, a new bird to our list, and one of our most local species, is very numerous in jungle-clearings in the interior and along the Badulla road in the Wellaway Korle.

---

* Unless measurements are taken, as well as an accurate description, when examining the collections of others, it is more than probable that an erroneous judgment will be pronounced a year or so afterwards in writing of such. Mr. Holdsworth took no measurements or description when looking over my Drymœcinæ.

It associates in small parties, consisting of the old birds and their immature broods, and affects tangled underwood, and not long grass and rushes, like *P. socialis*. It is probably confined entirely to this district, which will account for its having escaped the notice of previous collectors in Ceylon. This *Prinia, Sturnia albofrontata, Prionochilus vincens,* and perhaps *Geocichla layardi* are therefore our most local forms.

71. Budytes viridis (Scop.).

This Wagtail, numerous in the season in other parts of Ceylon, exists in very small numbers here, the climate being too dry and the open lands too parched for its habits. I think, at least, its absence from many parts of this district may be thus accounted for, as insect-life is always more rife in herbage exposed to damp than in parched-up wastes.

72. Corydalla richardi (Vieill.)?

I include this species doubtfully, as the large Pipit which I saw in certain places in the coast district, and did not procure, may have been *C. striolata*.

73. Corvus culminatus, Sykes.

This was the common Crow of the Hambantotta; and I did not observe *C. splendens* anywhere in the district. This latter is absent from the south-western region (*vide* Ibis, 1874, p. 23); but it is the common Crow of Balticaloa, the next town to the north-east of Hambantotta, and situated about the centre of the east coast; how far it extends south of that town I do not know.

74. Temenuchus pagodarum (Gm.).

This Mynah, an Indo-Ceylonese form, is very numerous in the open districts bordering on the salt lakes or leways. I saw greater numbers there than I have met with anywhere in the north-east of the island.

In the first year the head of this species is *brown* and wants the occipital crest, the throat and sides of neck are pale fulvous white, and the back and wing-coverts pale brownish grey. Soft parts as in adult.

75. Munia malacca, Linn.

Inhabits the coast districts and some localities in the Wellaway Korle. I found a flock of these Finches breeding with *Ploceus baya* in a reed-bed to the west of Hambantotta, in the month of July.

76. Munia malabarica (Linn.).

Another bird characteristic of many parts of the north, and which I have never seen on the west coast proper; abundant in the hot scrubby country of the maritime region. I observed it during the N.E. monsoon; but, as a matter of consequence, it would be equally if not more numerous during the S.W. wind, the sheltered time of the year in this district.

77. Mirafra affinis, Jerd.

Abundant in this part, which is just the country for it. Mr. Holdsworth has it "common at Aripo" (P. Z. S. 1872, p. 465).

78. Alauda galgula, Frankl.

Very numerous in the maritime region. I found it breeding in July near the leways. Mr. Holdsworth says it was "abundant at Aripo" (P. Z. S. 1872, p. 465).

79. Pyrrhulauda grisea (Scop.).

Abundant in both monsoons all along the sea-coast. Layard thought it to be a cool-weather visitant. It is another bird showing the analogies of this region with parts of the north. Mr. Holdsworth (P. Z. S. 1872, p. 465) says it is "confined to the north."

80. Osmotreron bicincta, Jerdon.

81. Osmotreron pompadoura (Gm.).

82. Carpophaga ænea (Linn.).

All these three species are abundant during both monsoons, *O. bicincta* along the sea-board in jungles up to twenty miles north of Hambantotta, where it gradually gives place to *O. pompadoura*, which abounds in the Wellaway Korle, and into the Bootala hills. *C. ænea* is extraordinarily numerous all along the Badulla and Hambantotta road, and in the forests along the Wellaway and Kirinde rivers.

83. Columba intermedia, Strickl.

There is a colony of these birds at the Hatagalla rocks, fifteen miles west of Hambantotta. I doubt not that it will be found at other suitable spots between Balticaloa and Kirinde.

84. Calcophaps indica (Linn.).

Plentiful on the forest banks of the rivers in the Wellaway Korle.

85. Pavo cristatus, Linn.

Abounds in the maritime region. The Peacock is almost unknown in the south-west.

86. Gallus stanleyi, Gray.

Abundant both in the interior and in the maritime region.

87. Galloperdix bicalcarata, Forst.

I only once heard this species in the Wellaway Korle in July.

88. Turnix taigori, Sykes.

In some localities this species occurs, but it is not numerous.

89. Glareola lactea, Temm. "Additions to Ceylon Avifauna," Hume, Str. Feathers, vol. i. p. 440.

This species of Pratincole does not seem ever to have been met with heretofore in Ceylon. I discovered it close to Hambantotta, frequenting the great sand hills there, and hawking like a Nightjar round the adjacent water-holes at twilight. I also found it on the shores of the leway. At this time (July) nearly all the birds I procured were in the mature dress. The natives informed me that it bred at Hambantotta. Mr. Hume wrote (*loc. cit.*) on an immature specimen I sent him in September 1873.

90. Charadrius fulvus, Gm.

Found in suitable localities during the season.

91. Ægialitis geoffroyi, Wagler, "Additions to Ceylon Avifauna," Str. Feathers, vol. i. p. 489.

Taking Mr. Holdsworth's catalogue as a base to work upon, this is another addition to the Ceylonese avifauna (published *loc. cit.*), which I found also at Hambantotta during the south-west monsoon in June and July. They were numerous on the great sand hills near that town, and consorted with small flocks of *G. lactea*. It is rare on the north-east coast, as in a tour up towards Jaffna, from Trincomalie, I met with but one example, my first, and that published *loc. cit.* Those met with at Hambantotta, out of season, and which were in winter dress, were probably all young birds, which, like the following species, remain to some extent behind for the first year on the south-east and east coasts.

92. ÆGIALITIS MONGOLICA (Pallas).

Abundant in the season for Waders (N.E. monsoon), and also plentiful in the S.W. monsoon, at which period most of the birds present were immature, or in winter dress, though some few were observed in partial nuptial plumage, the rufous pectoral band being incomplete.

93. ÆGIALITIS CANTIANA (Lath.).

I have given elsewhere a full account of this Sand-Plover breeding within our limits. In 1872 I observed as early as March several examples with the black frontal band, while in June and July, in the height of the breeding-season, nearly every bird had lost it, the sinciput being greyish, with an occasional black-tipped feather.

94. SARCIOPHORUS BILOBUS (Gm.).

Plentiful at both seasons of the year. I found it breeding near the leways. Up the country, in the Wellaway Korle, *Lobivanellus goensis* takes its place.

95. ESACUS RECURVIROSTRIS, Cuv.

96. ŒDICNEMUS CREPITANS, Temm.

Of these two species *Esacus* is the most numerous along the coast. It is most frequently heard at night, resting quietly during the day on the upper parts of sea-beaches.

97. STREPSILAS INTERPRES (Linn.).

I observed immature examples on some of the leways in March 1872. This is one of our rarest Waders.

98. Rhynchæa bengalensis, Linn.

Frequent in suitable localities. I shot a male in July, at which season they may be found occasionally anywhere in the low country. It may not be out of place to mention here that I identified the European Snipe from the Trincomalie district last year, an account of which was published in the J. A. S. B.

99. Numenius arquata (Linn.).

100. Numenius phæopus (Linn.).

Both these Curlews occur in suitable localities along the coast, the latter not so frequently as in the north-east.

101. Tringa subarquata (Güld.).

102. Tringa minuta, Leisler.

103. Tringa subminuta, Midd.

T. minuta is the most abundant of these three Stints, frequenting the muddy shores of the leways. Of all, I saw many examples round these lakes during the S.W. monsoon; but none were so plentiful at that season as *T. subarquata*. I shot a pair one day which were bowing and walking round each other, executing various little manœuvres typical of this family in the breeding-season; but they surely, in spite of the example set them by *Ægialitis cantiana,* cannot nest within our limits. Females, as far as my examples go to prove, are rather smaller than males. The dimensions of the above-mentioned pair were :— ♂, length 8·6 inches, wing 5·25, bill at front, straight, 1·65; ♀, length 7·9, wing 5, bill at front, straight, 1·4; other examples of this sex in my collection are larger than the above. At Hambantotta, during the season in question, they were generally seen in small parties, in which manner I have observed them to associate in the cool season in the north of Ceylon.

104. Totanus glottis (Linn.).

105. Totanus stagnatilis (Bechst.).

106. Totanus calidris (Linn.).

All abundant during the N.E. monsoon round the leways;

and both Greenshanks were common also during the S.W. monsoon. I observed no Redshanks at that season.

107. Himantopus autumnalis (Hasselq.).

Common all the year round at the leways, both east and west of Hambantotta.

108. Porphyrio poliocephalus (Lath.).

This species, which is somewhat local in its distribution, affects some of the tanks of the Kattregama and inland districts.

109. Gallicrex cristata (Lath.).

Found in suitable localities; but the character of the country is too dry for the habits of this bird.

110. Leptoptilu javanicu, Horsf.

111. Ciconia episcopus, Bodd.

Both these species I observed in July on some of the more inland and secluded tanks.

112. Ardea cinerea, Linn.

Found about tanks in the Magam Pattu and Wellaway Korle. It was breeding at a tank near Tissa Maha Rama in March 1872. It is absent from the south-west; and I don't think it affects the Colombo district, except as an occasional straggler.

113. Ardea purpurea, Linn.

114. Herodias alba (Linn.).

115. Herodias egrettoides, Temm.

116. Herodias garzetta (Bodd.).

117. Nycticorax griseus (Linn.).

These Herons all frequent the inland tanks of this district, and are especially numerous at those near Tissa Maha Rama, in the neighbourhood of Kattregama. *H. alba* spreads westwards towards Tangalle in equal abundance, and is, in fact, common throughout the island where there are large tracts of swampy land. *H. egrettoides* is confined, as far as my experience goes, to this district in the south; for I find it recorded in my notes on this locality for 1872. The above species were all breeding near Tissa Maha Rama when I was there in March 1872; with the exception of *N. griseus*, they consorted together, having their nests on the same trees; *H. alba*, however, was breeding, as well, with *Tantalus leucocephalus* and *Platalea leucorodia*.

118. Butorides javanica, Horsf.

119. Ardetta flavicollis (Lath.).

120. Ardetta sinensis (Gmelin).

121. Ardetta cinnamomea (Gmelin).

I met with all these Herons in various localities suited to their habits. I saw but one example of *A. flavicollis*, in March 1872, and one or two of *A. sinensis* at the small tank near Tissa Maha Rama, mentioned below. *Butorides javanica* was inadvertently omitted from my paper in 'The Ibis' for 1874, p. 30. It is tolerably common on the banks of the Gindurah, skulking under the bushes at the edge of the water, and is consequently very difficult to procure, unless shot from a boat.

122. Anastomus oscitans (Bodd.).

123. Tantalus leucocephalus, Forst.

124. Platalea leucorodia, Linn.

125. Threskiornis melanocephalus (Linn.).

126. Falcinellus igneus (Gm.).

These five species I found breeding near Tissa Maha Rama at a small tank, called Udinila, in March 1872. Emmerson Tennent well describes a visit to one of the great breeding-colonies, which are to be found in the wildest parts of our beautiful forest. No scene could be more interesting to a naturalist, or any lover of nature, than that which I was witness to at this tank in March 1872.

It was just day-dawn as I made my way through long grass, up to my waist, across a dried marsh, and came in sight of a tank, studded with huge and formidably thorned trees. Troops of tall white Herons, gaunt "Shell-eaters," awkward

Pelicans and Ibises lined the branches close to their nests, or stood like vanes on the tops of the forest-trees, while others, as if they had just awoke, flapped lazily about; huge Pelicans, on great "platforms of sticks," kept watch by their young and preened off the night-dew from their broad backs; little companies of Spoonbills and Ibises, mindful of hungry families, filed off to distant marshes, and disappeared over the tops of the forest-waves, while Cormorants and Darters dashed round and round the tank, as if they were training for a race. From behind a tree hard by I gazed on this splendid sight for a few moments, and hastily jotted down in my note-book the different species on their respective trees. The sun was getting up, and the birds were rapidly going off for food; so it was time to begin work and (cruel monster that I was! *mais que voulez-vous*?) carry death into the midst of the happy company. It was not long before I was up to my knees in black mud, while lazy crocodiles, waiting beneath the trees for hapless nestlings, floundered before me into the water. Bang, bang went the old 12-bore; and down came first of all a magnificent Grey Heron. Then what a scene there was! The lonely jungle resounded with bird-cries; Pelicans launched themselves from their nests and, mounting in the air, soared round in circles, accompanied by Herons, Pelicans and Ibises, while the "Shell-eaters" (*Anastomus*), the pluckiest and most numerous of all, swooped on me from dizzy heights with fearful swiftness and a booming whirr of their large wings; added to all which was the bang of my gun, mingled with frantic shouts to my coolies to "come on" and get up the thorny trees at once! approaching which they climbed with considerable hesitation, to my mind at the time, showing a remarkable lack of ornithological interest! But enough! such scenes as this are familiar to most readers of 'The Ibis,' and, when once witnessed, are not easily forgotten.

I brought away young of several species on this occasion, but did not succeed in rearing any but a *Tantalus leucocephalus*, which lived for some time, growing up a most amusing bird. It ate fish voraciously, squatting down on its tarsi and snapping its huge mandibles with a loud "crake" when hungry. It had a great antipathy to dogs and children, and would utter its harsh cries when approached by them. When taken from the nest, the bill was greenish black, with a light tip; it underwent a very rapid change with the growth of the bird, becoming yellowish at the tip, the terminal half being dusky greenish, leaving the base blackish green. When it died, somewhat less than six months old, the yellow of the tip was encroaching on the green rapidly; the iris was hazel, and the feet and tarsi fleshy reddish at this time. The red of the tertials was present from the earliest growth of the feather, and increased with age. The head was not bald, as in the adult, but feathered in a point down to the centre of the forehead; it was, together with the upper part of the hind neck, neutral brown, the feathers tipped light, gradually paling into grey on the lower neck, interscapular region, scapulars, and back; scapulars and wing-coverts dark on their inner webs and towards the base of the feathers; lesser wing-coverts and under wing-coverts dark iron-grey, margined lightish (these had been entirely grey a short time previous, the centres first of all becoming dark, the colour spreading over the feathers to the edges); tertials silver-grey, with black shafts and dark bases, the outer webs overcast with rose-colour; quills and rectrices black, with a strong greenish lustre; beneath the breast greyish, paling into white on the lower parts; under and upper tail-coverts white; under wing-coverts at the humerus and ulna-joint tipped with reddish white. In his description of the adult ('Birds of India'), Jerdon omits the broad, black, satin-white margined pectoral band, which is continuous with the same colouring of the under wing-coverts when the wings are extended; this is the most conspicuous part in the bird as it flies overhead. Jerdon also supposes it to be mute—a great mistake, as it is, when angered, a most noisy bird. With regard to its voracity, I may mention that one day my tame bird (which was at the time confined in an aviary with a Sea-Eagle, *Cuncuma leucogaster*) seized an enormous rat which I had in my hand as I was getting through the small doorway of the building, and "bolted" it instantly, before I could get through the door to take it from it.

127. PHŒNICOPTERUS ROSEUS, Pallas.

Inhabits the leways in great flocks, particularly in the cool season. Moormen are said occasionally to sell young birds at Balticoloa; and I therefore infer that it must breed between that place and Hambantotta.

128. SARKIDIORNIS MELANONOTUS, Forst.

129. ANSERELLA COROMANDELANA (Gm.).

130. DENDROCYGNA JAVANICA, Horsf.

131. ANAS PŒCILORHYNCHA, Penn.

This district is not so rich in Anatinæ as I had expected. *Dendrocygna* was the only form I myself observed; but I learnt of the occurrence of the remaining three species from tolerably trustworthy authority.

132. PODICEPS PHILIPPENSIS, Bonn.

I noticed this species on one or two occasions on tanks, but I have never seen it so abundant anywhere as on Colombo lake.

133. SYLOCHELIDON CASPIA (Lath.).

This Tern I observed during my visit in 1872 (March), but I did not notice it in this region during the breeding-season. It is nowhere numerous, as are other Terns. It is frequent about the salt lakes on the north-east coast from October till March, and many exist in that district throughout the year; but I have never once seen a sign of it on the lower half of the west coast at any season.

134. GELOCHELIDON ANGLICA (Montagu).

135. HYDROCHELIDON HYBRIDA, Pallas.

136. STERNA MELANOGASTER, Temm.

137. STERNA PELECANOIDES, King.

138. STERNA MEDIA, Horsf.

139. STERNULA SINENSIS (Gm.).

140. ONYCHOPRION ANÆSTHETUS (Scop.).

Full particulars touching *S. sinensis** will be found in the

---

* I would observe that Mr. Holdsworth is in error concerning *S. mi-*

P. Z. S. for the present year. The other species enumerated here, except *S. melanogaster*, are all abundant during the S.W. monsoon; I met with them everywhere along the coast in June and July last year; and, I have no doubt, breeding-stations of all except *O. anæsthetus* will be found on future exploration of remote spots in the district. *S. media* was in winter dress up to the first week in July; and specimens killed were adults too; but as they were all in abraded dress, and as some Sterninæ put on the nuptial garment during a very short period, it is quite possible that they may breed here in August*. Of *Sterna melanogaster* I only saw isolated examples at either season of the year; *S. pelecanoides* was in breeding-dress, and, I have no doubt, was nesting somewhere in the vicinity of Hambantotta. Since writing on this species in 'The Ibis' (1874, p. 33), I have procured examples near Galle in full breeding-dress, and found the species abundant out at sea in the height of the S.W. monsoon. It appears that when breeding (Mr. Nevill informs me that he has taken its eggs near Amblangodde, twenty miles north of Galle) it does not affect its wonted spots along the coast; and I therefore had overlooked it during that season up to the time of writing (*loc. cit.*)†. *G. anglica* is, with *S. media*, the most abundant of the Sterninæ in this district, and it is found in great numbers about the salt lakes extending up the whole line of the north-east coast. *H. hybrida* is the most universally distributed of all our Sterninæ, but leaves the west coast during the S.W. monsoon, as far as my experience goes, entirely; and I am therefore of opinion that it breeds on the

---

nuta not being found in Ceylon (P. Z. S. 1872, p. 481), as I sent home a specimen dated Colombo, 29th September, 1869, of the small, *black-shafted, dark-quilled* Little Tern, which Lord Walden identified as that species. I have recently procured it in the Trincomalie district.

* I was at Hambantotta for two days last August, but I was unable to do any shooting; I, however, saw several examples along the coast, and numbers off the Bass Rocks, which, as well as I could see, appeared to have the vertex quite black.

† There is much to be said touching the local distribution and breeding of our Terns; and I hope some day to be able to work out the subject more completely than I have done up to the present time.

south-east coast. During my recent visit to Hambantotta, *en route* for this station, I observed *O. anæsthetus* in good numbers off the Basses. Specimens I have recently procured were in immature dress; and I have no doubt all our birds are young.

141. Pelecanus philippensis, Gmelin.

142. Graculus javanicus, Horsf.

143. Plotus melanogaster, Forst.

These species I found breeding, in March 1872, at Uduwilla tank, near Tissa Maha Rama. The Pelecan is, perhaps, as abundant in this district as anywhere in Ceylon. I have seen a score and a half on some of the leways in one mob.

144. Graculus sinensis, Shaw.

This species is nowhere abundant in Ceylon, as far as I have observed up to the present time. I saw several examples of it in March 1872 at Tissa Maha Rama.

Trincomalie, 4th Jan., 1875.

P.S. I have just received, while finishing this paper, my April copy of 'The Ibis' (1874); it has been running round the world after me, and, coming up from Australia, has at last caught me up here!

Though somewhat late in the day, I feel that it is incumbent on me to notice and reply to Mr. Holdsworth's observations on my "Birds of the south-western Hill-region," chiefly with the view of correcting a singular error which he has made touching one of my identifications, but also to point out several erroneous conclusions which he has arrived at concerning the distribution of species.

In the first place, as regards dates and details, my paper did not purpose to be an exhaustive catalogue of species, but merely a running outline, calling attention to their occurrence in a certain region; the former would have taken up too much space in 'The Ibis.'

Touching the validity of my view of the south-east as an "Indo-Ceylonese region, I think that has been confirmed in this paper.

As to the species, Mr. Holdsworth notices :—

Chrysocolaptes stricklandi.

Has hitherto been *erroneously* considered a hill-bird; it is no more so than *Brachypternus ceylonus*, which I have found all through the northern and western coffee-districts up to 5500 feet. For evidence of *C. stricklandi* in the low country, *vide* 'Stray Feathers' (vol. i. p. 346, and vol. iii. p. 200). It is resident all round the north-east, east, and south-east coasts in wild country during the N.E. monsoon, when, if it were a visitor to the low country, it ought to be absent from these parts. The specimen Mr. Holdsworth alludes to (p. 123) was shot on the south-east coast in March.

uEmyias sordida.

Zosterops ceylonensis.

Shot and observed in July and August in the Kookool Korle and in the Oodogamme forests* in May, or, in both cases, during the S.W. monsoon, when, if they were not resident, they would have been absent from that region. But, in truth, I may here again remark that the mountains of Southern Ceylon (Ibis, 1874, p. 7) are a distinct zone, separated from the high central province by a valley of low country, running through from the Ratnapoora district to the plains of the south-east, and that there is probably no interchange of species between them and the high region of the island; for the vast forests and deep valleys running out of our district towards the north-east, form an ample *abri* against the violence of the S.W. monsoon.

Drymocataphus fuscicapillus.

Perhaps I should have used the words "most commonly distributed" instead of "commonest"; I did not mean to imply that it was the most *numerous* of birds in the southern province, and imagined that my description of its habits and of the places I found it in, would have militated against the idea of its being abundant. *D. fuscicapillus*, though common in a district, will only be found in peculiar localities, such as dense damp scrub (it invariably affects bamboo jungle in the Galle district); its note is heard most in early morning after rain, as I have already observed. I don't know how Mr. Holdsworth could have overlooked it in the southern province; for even though his labours were confined to one locality (Akkuresse), which is one of the worst spots in the southern province for its typical forms, I should have thought it could have been found there. I procured it not far from Akkuresse. Some specimens in my collection from the south are dated 12th Jan. 1872, 25th April 1873, 19th June 1871, 19th August 1872, 17th Nov. 1871—giving a sequence of months. It is as plentiful close to Trincomalie as in the south, but, notwithstanding, is difficult to procure, except in the early morning.

---

* *Z. ceylonensis* only.

PALÆORNIS CALTHROPÆ.

Is resident in the southern-province mountains, but is found nowhere near Akkuresse, where Mr. Holdsworth collected. I will venture to say it would not turn up there in a ten years' residence. Between this locality and the mountains proper of the southern province, or even the great subsidiary hill-forests on the banks of the Gindurah, is a tolerably high, worthless (ornithologically speaking) range of hills, containing nothing of interest to the collector. It is a tolerably different region in character from the Morawa Korle, to which Mr. Holdsworth believes it to be analogous. An ascent of 1600 feet, and then a drop of 200, through a space of seventeen miles over these hills, brings the traveller to the district of Morowaka, which is still wanting in mountain-species; twelve miles further, through beautiful hills, brings one to the verge of the Morowa Korle; and the chances are that, after resting your wearied limbs at the Denyia Rest-house, the first bird-sounds you will hear on the following dawn will be the "crake" of *P. calthropæ* and the metallic cry of *Eulabes ptilogenys*. *P. calthropæ* is not so numerous in the Morowa Korle as in the Lion-King forests of the Kookool Korle, which lies to the north-east of the coffee-estates. I saw greater numbers in this Korle at elevations of about 2000 feet, during the most violent S.W.-monsoon weather in August, than I observed anywhere else in the course of a tour through the whole of the central coffee-estates.

TRINGA TEMMINCKI.

"Proved to be *T. salina* when examined in this country."

How Mr. Holdsworth committed this singular error is almost unaccountable to me. At page 29 I spoke of *T. temmincki*; but reference was made to the *northern province*, and not to this district. Even, however, if Mr. Holdsworth had not correctly read the text, he must surely have seen my additions to the avifauna of Ceylon, contained in part 6, vol. i. 'Stray Feathers,' in which, at page 491, *T. temmincki* is characterized, with a series of notes on *T. salina* and *T. minuta*, showing that at that time I was well acquainted with all these species. At a previous date in 1872, when not sure of the identification of *T. minuta* and *T. salina* respectively, I had sent home a specimen of the latter, procured on the 26th of January of that year; but why this fact should have precluded the possibility of my obtaining *T. temmincki* at a later date, I fail to understand.

For the benefit simply of those who take an interest in the ornithology of Ceylon at home, I may mention that, besides the species mentioned by Mr. Holdsworth, I have lately added to his list (published in 'Stray Feathers') *Erythropus vespertinus*, *Gecinus striolatus*†, *Acrocephalus stentorius*, *Ægialitis geoffroyi*, *Tringa temmincki*, *Glareola lactea*, *Onychoprion fuliginosa*†, *Sterna minuta*‡.

XXXVII.—*The Birds of Transylvania.* By CHARLES G. DANFORD, and JOHN A. HARVIE BROWN.

[Continued from p. 312, and concluded.]

*149. FRINGILLA CŒLEBS, L. *Szemeti Pinty* (Dung-Finch).

Common everywhere, from the low country to the limit of the pine-region. Its note seems to be clearer and shriller than that of the same species in Great Britain.

---

† Not procured by myself.

‡ *Vide suprà.*

150. **Fringilla montifringilla**, L.

Common in winter in large flocks. According to some authorities, a certain number of these birds remain the whole year, and breed in the higher mountains. Herr Buda Ádám says he has seen the young in summer among the mountains at Hátzeg; and we were told that Herr Hermann, the former curator of the Klausenburg Museum, took many of their eggs at Vlegyásza, near Vajda Hunyad. Herr Csáto says they are only to be met with in winter. Herr Ottó remarks that it "comes and goes very quickly." In the absence of substantial proof to the contrary, we are inclined to consider Herr Csáto's account as the more probable.

*151. **Fringilla chloris**, L. *Zöldike.*

We did not see many; but they are common throughout the country in autumn.

* 152. **Fringilla cannabina**, L. *Kenderike* (Hemp-Finch).

Common everywhere. We saw many in the Görgény district.

153. **Fringilla rufescens**, Vieill. *Kövi csiz* (Stone-Finch).

Common in harvest in large flocks, and not unfrequently nesting in bushes among the lower mountains.

*154. **Fringilla carduelis**, L. *Tengélicz.*

Generally distributed and common.

*155. **Fringilla spinus**, L. *Csíz.*

Common among the pines during the breeding-season, and in the plains in winter.

156. **Fringilla serinus** (L.).

Very rare, but sometimes occurs in autumn and winter. Bieltz mentions that it was got by Herr Stetter at Topanfalva. In 1872 Herr Ottó wrote that it had once been seen in the Mezöség; and Danford, writing from Transylvania under date of October 29th, 1874, says:—"Herr Buda Carl has just come in from a chase after two *F. serinus*, neither of which he got."

157. Pyrrhula rubicilla (Pall.). *Süvölto*; *Piròk*; *Havasi Pinty* (Mountain-Finch).

Rather common, frequenting the mountain-woods during the breeding-season, and later in the year appearing in the low country in considerable numbers.

Obs. Bieltz says this is the only member of the family which has hitherto been observed in Transylvania; but there is little doubt that *Carpodacus erythrinus* (Pall.) and *P. enucleator* (L.) do occur, as they have both been found by Herr Petényi on the adjoining Hungarian frontier, and Graf Lázár says he is sure the former has occurred near Tölgyés.

158. Loxia curvirostra (L.). *Keresztorrú Madár.*

Common among the pines and firs in many parts of the country.

*159. Coccothraustes vulgaris (Pall.). *Magtörö Madár*; *Meggyvágó* (Weichsel-biter).

We met with the Hawfinch pretty frequently in the Görgény district among woods and gardens. It does not remain over the winter.

*160. Sturnus vulgaris, L. *Seregély* (A crowd).

Generally common. Migratory.

161. Pastor roseus (Linn.). *Rózsás Rigó* (Rosy Thrush).

This bird is of very uncertain appearance in the country. In 1835 it was very abundant at Hermannstadt. They generally come about June, and are found in company with the Starlings. Herr Ottó states that they were very abundant in the Mezöség in 1868 (A Mezöseg II. &c.), and he observed them there on the 30th May and 4th June.

*162. Oriolus galbula, L. *Sárga Rigo* (Yellow Thrush).

Generally common on the outskirts of large woods and in gardens. We found them at Záh and Görgény, and in the oak-woods at Sztána, near Klausenburg. They come in the beginning of May; and the old males generally leave in August.

*163. Pyrrhocorax alpinus (Vieill.).

Rare, and only to be met with among the high mountains, where they breed. In September 1872 Danford saw a pair in the glen of Stina de Ruc, near the Retjezát, at an elevation of about 5000 feet. He was much struck with their tameness, as they came day after day about the hut, showing very little fear. HH. Csáto and Buda Ádám observed them also at Nuksora, near the same locality.

Obs. Pyrrhocorax graculus (L.). Bieltz says of this species:—"It is true that the occurrence of this bird in Transylvania has not yet been proved; but as, according to Zavadzki, it appears amongst the highest of the Bukovina Carpathians, it cannot be wanting on our Rodnaer mountains; for instance, on the Kuh-horn, &c." He also alludes to it in his 'Beitrag zur Unterscheidung der rabenartigen Vögel.'

*164. Corvus monedula, L. *Csóka.*

We regret that we did not bring home any of these Jackdaws, and are therefore unable to state whether or not the *Corvus collaris* of Drummond occurred among them or not. Many we observed had extremely light-coloured necks, even as late as the beginning of June, though the whitish shoulders spoken of by Mr. Simpson (*cf.* Ibis, 1860, p. 385) were not apparent.

*165. Corvus corax, L. *Holló.*

Common throughout the country.

*166. Corvus cornix, L. *Varju.*

Common at all times; but in no country visited by us have we found this bird so very abundant as it is during autumn in Transylvania.

167. Corvus corone, L.

We have not observed this species or variety in the country. Bieltz says it occurs, mentioning it as a variety of *C. cornix.* It has also been found at Benczencz. Herr Buda Ádám has never met with it near Hátzeg.

*168. Corvus frugilegus, L. *Fekete Varju* (Black Crow).

We saw this bird during our present visit only in the Székler country; but it is common at Hátzeg and many other places. Bieltz says:—"In some parts of the country it bears the name of *Teleki varju*, from a belief entertained that at one time it did not exist in the country, but was introduced by a certain Count Teleki;" and we have since ascertained that it actually was introduced by him.

169. PICA RUSTICA (Scop.). *Szarka.*

Common everywhere.

*170. GARRULUS GLANDARIUS (L.). *Mátyás* (Matthias).

Very common. There are great numbers among the woods at Hátzeg in autumn.

*171. NUCIFRAGA CARYOCATACTES (L.). *Havasi Mátyás* (Mountain-Jay).

Common among the higher mountain-woods during the earlier part of the year, but descending in autumn. Danford saw many of them in October, busy feeding among the hazel-bushes in the Klopotiva gorge. It sometimes comes low down, and seems to be occasionally migratory, as in 1851 a large flock visited the Tokay vineyards in Hungary (*Stetter*).

*172. COLUMBA PALUMBUS, L. *Örves Galamb.*

Common at some seasons of the year; but during our summer visit we did not see any.

*173. COLUMBA ŒNAS, L. *Vad Galamb* (Wild Pigeon).

Common everywhere among the beech- and oak-woods of the lowlands. It arrives in February, and leaves in autumn.

Obs. Of *Columba livia* Bieltz says:—"This species, which is found wild in Southern Europe, especially in those countries bordering on the sea, and which there nests in rocks, breeding yearly twice or three times, is the stock of our tame Pigeons. They often become wild again with us, and are met with breeding on towers, in old walls, and fissures of rocks."

*174. COLUMBA TURTUR, L. *Gerlicze.*

Common in gardens and the bushy woods of the low country, but has also been seen on the Retjezát by HH. Csáto and Buda Ádám.

175. LAGOPUS MUTUS, Leach. *Hó Fajd* (Snow-Grouse).

Very rare, some authorities denying its existence in the country. Bieltz says it has been found on the highest peaks of the Hátzeg and Arpach mountains; and C. Boner, in his work on Transylvania (p. 144), says, "Ptarmigan may be shot on the mountains near Hátzeg." Herr Stetter got one on the Retjezát; and HH. Csáto and Buda Ádám were informed by a peasant that he had seen some "*white Partridges*" there.

176. Tetrao urogallus, L. *Vad Kakas* (Wild Cock); *Siket Fajd* (Deaf Grouse).

Tolerably common among the high undisturbed forests in most parts of the country.

177. Tetrao tetrix, L. *Nyir fajd* (Birch-Grouse).

Not common, but pretty well distributed in the north and north-east. They frequent the open places at the edges of the high mountain-woods, and, from their habit of running into the impenetrable thickets of creeping pine, are exceedingly difficult to find. According to Herr Csáto ('Birds of the Retjezát,' &c.), *T. tetrix* pairs a fortnight later than *T. urogallus*.

Obs. The hybrid *T. medius* sometimes occurs. There is a male in the Hermannstadt collection, and a female in that of Herr Buda Ádám.

*178. Bonasa betulina (Scop.). *Császár Madár* (Emperor-bird).

Common among the lower mountain-woods, especially where there is an undergrowth of small trees and bushes.

*179. Perdix cinerea, Lath. *Fogoly Madár*.

Generally distributed on the low ground, but not numerous. Herr Buda Ádám shot one at Urik Burlea, behind the Retjezát, at an elevation of about 6000 feet. There was a covey; and they had, no doubt, been bred there. The bird differs in no way from that frequenting the plains.

Obs. Bieltz says:—"The Stein-Feldhuhn belonging to this part of the world—*P. saxatilis* (Meyer)—does, according to some accounts, occur in Transylvania; and I have also been assured from trustworthy sources that we have a second Partridge in Transylvania."

*180. Ortygion coturnix (L.). *Fürj.*

Common everywhere in the lowlands, from April to September.

181. Phasianus colchicus, L. *Fáczán.*

Formerly tolerably common in the preserves of some of the nobility; but during the revolution of 1848 most of them were destroyed. We are not certain that it now exists at all.

*182. Crex pratensis, Bechst. *Haris.*

Common everywhere. Migratory.

183. Crex porzana (L.).

Common everywhere, and migratory.

184. Crex minuta, Pall.

Not uncommon. We probably saw it at Záh and Tóhát. The specimens in the museum at Klausenburg were got at Szamosfalva. Not rare at Gyéké (*Ottó*).

185. Crex pygmæa, Naum.

Rare, but has been found in the Strell valley and in various parts of the country.

186. Rallus aquaticus, L.

We did not see it during our visits; but it is said to be generally common. Herr Csáto says it is migratory in the Strell valley.

*187. Gallinula chloropus (L.). *Vizi tyúk.*

Common everywhere and migatory.

*188. Fulica atra, L. *Hóda; Szárcsa.*

Common everywhere, especially in the Mezöség. It is migratory, arriving in April and leaving in October.

189. Otis tarda, L. *Tüzök.*

Not uncommon in various parts of the country, but chiefly found near Thorda, Alvincz, and Mühlbach. They also occur in the Strell valley; and we were told that a small flock was often seen at Záh. They nest in meadows and corn-fields.

190. Otis tetrax, L. *Kis Tüzök.*

Much rarer than the preceding, but occasionally met with during its migrations.

191. Glareola pratincola (L.).

Rare. It has been killed in May on the Strell, and has also occurred in the neighbourhood of Klausenburg and Hermannstadt. Herr Buda Ádám says they come every year, and this year there was a flock of about forty.

192. Œdicnemus crepitans, Temm. *Reznek Tüzök* (Dwarf Bustard).

Very rare. It has occurred at Alvincz, also on the Maros and in the Hátzeg valley. Herr Ottó records one obtained at Szent Miklós, on September 23rd, 1867. It was struck down by a Sparrow-Hawk.

*193. Vanellus vulgaris, Bechst. *Libucz; Bibicz.*

Common, but not numerous, and not remaining over the winter. We saw a few in the Mezöség.

194. Squatarola helvetica (L.).

Very rare. It has been got in the Mezöség; and Herr Buda Ádám shot one on the 24th May, 1864, at Zeykfalva.

195. Charadrius pluvialis, L. *Esö Szalonka* (Rain-Snipe).

Not uncommon in spring and autumn.

196. Charadrius morinellus, L.

Not uncommon, and has been found breeding by Bieltz, who brought a nest of two young and an addled egg from the Frumoasze mountain, near the Cibensquelle, at an elevation of about 7000 feet. They are also reported to nest near the lake of Zenoga, on the Retjezát. Danford examined the specimens above mentioned in the Museum at Hermannstadt.

197. Charadrius hiaticula, L.

Rare, but occasionally seen during its migrations.

*198. Charadrius curonicus, Gm. *Kis Jöveny-futö* (Little Sand-runner); *Törpe Lilik* (Dwarf Plover).

Common along the stony parts of rivers. We observed it at Bogát, on the Maros, and at Hátzeg.

199. Charadrius cantianus, Lath.

Rare. It is said to have been found breeding in the country. Herr Csáto says it rarely flies over from the plains of the Maros into the valley of the Strell.

200. Strepsilas interpres, L.

Very rare. It has been shot at Brettye, on the Strell.

201. Hæmatopus ostralegus (L.).

Rare, but is sometimes met with during its spring migrations. Herr Buda Elek shot one, and saw others at Russ, in the Strell valley. We were also told by Count Bánffy Béla that he had seen a small flock at Szent Mihály during May of the present year.

202. Recurvirostra avocetta, L.

Rare. Herr Buda says it has occurred; and Bieltz mentions two, one of which was shot at Reussbach, near Hermannstadt, in 1835, and the other he saw in the market in 1846.

203. Himantopus autumnalis (Hasselq.).

Rare. It has been got near Hermanstadt, and occasionally occurs in the Strell valley, more frequently during the spring migration. Herr Ottó records a pair from the Mezöség, of which the female was suffering severely from a large tapeworm.

204. Phalaropus fulicarius (L.).

Herr Ottó records a specimen killed by Graf Kemény János, which was previously recorded by Graf Lázár Kálmán, and further states :—"There was also a specimen which had been shot in the Mezöség, in the Museum at Nagy-Enyed :" this specimen, in common with much of the contents of the museum, was destroyed during the revolution of 1848.

205. Totanus canescens (Gm.).

Not rare during autumn on the rivers Szamos, Klopotiva, Strell, &c. It is said to breed in the country.

206. Totanus stagnatilis, Bechst.

Not uncommon in spring and autumn among the stones and sandy places on the Strell, Klopotiva, and other streams. Herr Ottó affirms that it only occurs during migration; but our friend Mr. Dresser informs us that Frivaldsky showed him specimens of *T. stagnatilis* obtained in Transylvania in the breeding-season, and fully believes it to breed there not uncommonly. He further states that he has eggs, taken at Apay, in Hungary, by Frivaldsky; and Herr Buda Ádám has seen the young near the Platten See, where it is known to breed in the Venetianischer lake.

207. TOTANUS FUSCUS (L.).

According to Herr Csáto and Herr Buda this bird occurs not uncommonly on the Strell and Klopotiva during its migrations. A male specimen in the museum at Klausenburg was shot in June on the Szamos.

*208. TOTANUS CALIDRIS (L.).

Not uncommon during its migrations. We saw them in flocks on the lakes of the Mezöség.

*209. TOTANUS GLAREOLA (L.).

Not rare during its migrations. We met with a few specimens at Tóhát and Záh in May.

*210. TOTANUS OCHROPUS (L.).

During our visit to Hátzeg, at the end of April, we saw a specimen of this bird at Réa; and Danford found it very common in the same locality in autumn. Herr Buda Ádám and Bieltz agree in saying that it breeds in the country, nesting among sand and stones; but Herr Buda afterwards told Danford that, though he sees the birds the whole summer, he has not actually found the nest, but feels quite sure that they must breed. Considering the abnormal habit of this species during the nesting-season in Pomerania and other northern localities where its eggs have been found, we consider this account scarcely sufficiently authenticated. Mr. W. H. Simpson, however, speaking of this species as an inhabitant of Western Greece (Ibis, 1860, p. 390), says:—"Some individuals of *Totanus ochropus* remain so late that their breeding-quarters may be nearer than is generally supposed. We can believe almost any thing of a bird that so far departs from the habits of its congeners as occasionally to lay its eggs in old nests of the tree-building birds."

*211. TOTANUS HYPOLEUCUS (L.).

Common throughout the country.

212. LIMOSA ÆGOCEPHALA (L.).

Not common; some years, however, appearing in considerable numbers. We saw one which had been killed on the Maros, at Szász Regen. Herr Csáto says several specimens were got on the Strell in May and June. The specimens in the Klausenburg Museum were killed in July at Szamos Falva.

213. LIMOSA LAPPONICA (L.).

As uncommon as the preceding. Both occur more frequently during the spring than in the autumn migration.

*214. MACHETES PUGNAX (L.). *Bajnok Bíbicz* (Champion Plover).

Common in marshy ground during its migration. Danford saw them in the autumn on the Szamos near Klausenburg. They are never found in full breeding-plumage (*Buda*).

215. TRINGA CANUTUS, L.

Not rare on river-sides during its migration.

*216. TRINGA SUBARQUATA (Güld.).

Not rare during its spring migration, but less frequent in autumn. A specimen in full breeding-plumage was shot during our stay at Görgény, on May 29th. They have also been obtained at Gyéké in May, and occur in small flocks in May and June on the Strell. The above-mentioned specimen is in the Klausenburg Museum.

217. TRINGA MINUTA, Leisl.

Rare. It occurs more frequently during the autumn migration than in the spring. It has been procured by Herr Csáto at Koncza and at Alvincz (*Graf Lázár*).

218. TRINGA ALPINA, L.

Not common, but to be met with during most years, especially in autumn. Herr Buda Ádám has shot several at Réa both in spring and autumn.

219. TRINGA TEMMINCKI, Leisl.

Herr Csáto says that it occurs rarely in spring, but more frequently, either singly or in little flocks, at the beginning of autumn. He has procured it at Koncza.

*220. Scolopax gallinula, L. *Kis Sár-szalonka* (Little Mud-Snipe).

Common during it migrations.

*221. Scolopax gallinago, L. *Sár Szalonka.*

Common during its migrations. Bieltz says that they breed in the country.

Obs. The following is a description of two specimens of the variety *S. brehmi*, Kaup, in the collection of Herr Buda Ádám, three, all of which agree, having been obtained by him at Kriseny :—

S. brehmi is of exactly the size of and similar in colour to *S. gallinago*; but the tail of the former has a deep double indentation, and contains sixteen feathers, some being three times barred and others oftener, and the two central having short projecting terminal spines; whereas that of the latter, when extended, is of a regular rounded fan-shape, and contains fourteen feathers, each usually with five or more bars. On a reexamination of these specimens, Danford thinks the points of the two central tail-feathers being bare is due to abrasion, but that the indentations cannot be accounted for in the same manner.

Herr Buda Ádám says that it has a different flight and a different cry, and that *when flushed* it always rises silently.

For full description of *S. brehmi*, see 'Lehrbuch der Naturgeschichte,' Brehm (p. 623); and additional remarks will be found in Salvadori's 'Fauna d' Italia,' "Uccelli" (p. 228).

222. Scolopax major, Gm.

Solitary birds are not rarely met with during migration at Hátzeg, the Strell valley, Gyéké, and other localities.

*223. Scolopax rusticola, L. *Szalonka.*

Generally common. They come in March and April, and, remaining but a short time in the low country, proceed to their breeding-places in the mountains. In September they descend, the flight lasting till the beginning of November, a few remaining still later when the weather is very open.

224. Numenius arquata (L.). *Mezei Szalonka* (Field-Snipe).

Rather rare, and only found during migration. It occurs at Hátzeg and in the Strell valley. The specimens in the Klausenburg Museum are from Maros Vásárhely.

225. Numenius tenuirostris, Vieill.

Very rare. Bieltz says that a specimen was shot by Herr Stetter on the marshy banks of the Maros, near Maros Némethi.

226. Numenius phæopus (L.).

Still rarer than the Curlew, but sometimes to be met with in the same localities during migration.

227. Calidris arenaria; L.

Solitary specimens of this bird have been got in various parts of the country.

228. Grus communis, Bechst. *Darú.*

Sometimes met with during its migrations. Herr Csáto says he has seen them both in large and small flocks passing over the Strell valley.

*229. Ardea cinerea, L. *Gém; Szürke Gém* (Grey Heron).

Common everywhere, especially in the Mezöség, where they nest among the tall reeds. The tops of the reeds are broken down so as to form a platform from four to nine feet above the water; and the nests, which are made almost entirely of broken pieces of reed, are thus strongly supported.

*230. Ardea purpurea, L. *Veres Gém* (Red Heron).

Equally abundant with the preceding in the Mezöség. We found them breeding in the same situations—and if not actually in company with the common Heron, yet generally very close to them. They are said to be scarcer in other parts of the country.

231. Ardea alba, L. *Nagy Fehér Kócsag.*

Only found during migration, there being no record of its having bred in the country. We heard from Herr Buda that there were many in the Hátzeg district this year after we left. The specimen in the Klausenburg Museum was shot at Apahída in November 1867, as recorded by Herr Ottó.

232. ARDEA GARZETTA, L. *Kis Kócsag* (Little Heron).
Rare. It is reported to have nested near Felvincz. We saw a specimen which had been killed this year at Maros, Vásárhely, and received one shot at Hátzeg. Herr Csáto says they visit the Strell valley in little flocks in May and June.

*233. ARDETTA MINUTA (L.).
Common among the lakes of the Mezöség and similar localities. We got several specimens at Záh.

234. BOTAURUS STELLARIS (L.). *Nádi Bika* (Reed-bull).
Not very common. It occurs in the Mezöség, where we heard but did not see it. The Strell valley, Hátzeg, &c. are other localities.

235. BUPHUS COMATUS (Pall.). *Sárga Gém* (Yellow Heron).
A migratory species, much commoner in some years than in others. Little flocks are sometimes met with on the Strell in May and June, and more rarely in autumn.

*236. NYCTICORAX GRISEUS (L.). *Ejjeli Kóesag; Vak Varju* (Blind Crow).
Not uncommon, and migratory. At Záh we found a large colony, which was chiefly composed of adult birds with a small sprinkling of immature examples. They had not begun to breed when we left in the middle of May. In the Klausenburg Museum is a specimen with four crest-feathers.

*237. CICONIA ALBA, Bechst. *Gólya.*
Common everywhere in the plains and well-watered districts, especially in the Háromség. Nearly every village in some districts has its Stork's nest; and the birds are not allowed to be disturbed, the popular belief being that they will, if interfered with, set fire to the house.

*238. CICONIA NIGRA (L.). *Fekete Gólya.*
Not nearly so common as the preceding. We saw a pair on a bit of marshy ground near Szász Régen, in the Székler

country. Herr Buda Elek found it breeding in the beech-woods at Ponorics. It also nests at Demsus, near Hátseg.

239. Ibis falcinellus (Gmel.). *Ibís.*

Solitary birds are not uncommonly met with during the spring migration. We saw one which had been killed last year at Görgény; and another was sent to us from Hátzeg. It also occurs on the Strell and Alt rivers.

*240. Platalea leucorodia, L. *Kanálos Gém.*

Rare, but occurs during its spring migration. We saw one at Tóhát, flying high and then settling on a field in company with some Herons. Herr Csáto has frequently observed it in May and June on the Strell.

241. Cygnus olor (Gmel.). *Hattyü.*

Small flocks are occasionally met with on lakes and rivers, especially on the Alt and Maros. It has also been obtained on the Strell at Russ by Herr Buda Elek.

242. Cygnus musicus, Bechst.

Still rarer than the preceding. Herr Csáto and Herr Buda Ádám each hilled one in October 1861 in the Strell valley.

243. Anser ferus (Gmel.). *Vad Lúd* (Wild Goose).

Common in large flocks during its migrations.

244. Anser segetum (Gmel.). *Vetési Lúd* (Growing-grain Goose).

Not rare during migration, in small flocks. One shot at Apahída is in the Museum at Klausenburg.

245. Anser albifrons (Gmel.).

Very rare, but has, according to Herr Buda Ádám, occurred in the country.

246. Anser brenta (Pall.).

Very rare, but has occurred in various parts of the country.

Obs. Bieltz thinks it probable that *A. leucopsis,* Bechst., also occurs.

247. Tadorna rutila (Pall.).

One specimen is recorded by Bieltz as having been killed on the Maros by Herr Stetter.

248. Tadorna cornuta (Gmel.).

Very rare, and only to be met with during hard winters. Herr Buda Elek shot one in 1840 on the Strell; and it is mentioned as having occurred in the Mezöség by Herr Ottó, on the authority of Baron Kemény Béla, from whom, however, Herr Stetter received only a description.

249. Spatula clypeata (L.). *Kanálos Récze* (Spoon-Duck).

Not uncommon during migration at Gyéké and other parts of the Mezöség, and in the Strell valley.

*250. Anas circia, L. *Pergö Récze.*

Generally distributed and common on lakes and rivers. We saw it at Hátzeg and in the Mezöség.

*251. Anas crecca, L. *Apró Récze* (Little Duck).

Common everywhere.

*252. Anas strepera, L.

Not rare, especially at Gyéké, where they are said to breed. We got a female at Záh.

*253. Anas boschas, L. *Kácsogó-Récze.*

Common everywhere.

*254. Anas acuta, L. *Nyil-farku Récze* (Arrow-tailed Duck).

We saw it in the Mezöség at Záh; but it is not considered common.

*255. Anas penelope, L. *Sipós Récze* (Whistling Duck).

Not uncommon in winter and during its migrations. We saw it at Záh.

*256. Erismatura leucocephala (Scop.). *Kék-orru Récze* (Blue-billed Duck); and at Nagy-Czég, in the Mezöség, the native sportsmen call it *Vadpézsma Récze* (Wild Musk-Duck).

This curious bird, which we found in the Mezöség, is not very common. We met with a flock of nine or ten birds at a small reedy lake near Záh; but, owing to the difficulty of paddling the wretched square-ended canoes or punts (*csónak*), the only substitutes for boats in the country, we found great difficulty in getting near them, and for some days only succeeded in shooting one male, and that at very long range. A couple of days before our departure, however, we were more fortunate; the birds were tamer, and let us get a number of long shots, by which we killed three more males and a female. They never attempted to leave the lake, but after a short rapid flight pitched again, generally about the same place. They swam very fast, keeping their stiff Woodpecker-like tails erect at right angles with the body, and when wounded, though they dived constantly, showed no disposition to escape, like other Ducks, by hiding among the reeds, but on the contrary avoided them. The bill of the male, when newly killed, is of a beautiful pure ultramarine, this colour extending even to the interior of the mouth. It soon fades, being merely connected with a thin, easily moved membrane; and in twenty-four hours the bill loses its brilliant appearance, turning to a brownish grey. We were too early for their nesting, but were assured that they bred in this district, probably at the lake where we found them. In the Klausenburg Museum are some young birds sent from Gyéké, and also some adults got there by the curator of the Museum, Herr Klir. Writing of this species as observed by him in the Mezöség (A Mezöség II. A Mezö-Záh, &c.), Herr Ottó says,—"They came in April, went away for a short time, and returned in May; nested among the thick reeds in the lake at Záh: in the first half of June had fine young (chicks), three of which were taken." He compares the look of the bird, when swimming, to the double-peaked Hungarian saddle. Graf Lázár also procured two unfledged birds in the Tartaria marsh, and a young bird at Benczencz.

Herr Hermann Ottó describes the young as follows:—

"Beak bluish black, with a swelling at the base. Feet of a similar colour. Plumage brown-black. From the base of the bill, under the eye, and continued over the ear, a white stripe. Chin, with a broad outward curve back under the cheek, white, so that the brown cheek appears bordered underneath by this curve, and above by the eye-stripe. Belly dirty white, which colour loses itself in the sides. Under the shoulder a light spot on both sides, which hardly shines through and in many specimens is wanting. Tail-feathers slit up and spread out like a fan."

257. FULIGULA RUFINA (Pall.).

Rare, but, according to Bieltz, has been shot on several occasions in the Mezöség, and in the neighbourhood of Klausenburg. Herr Ottó saw one pair in the Mezöség on the 19th April, and two pairs at Záh on the 30th March.

*258, FULIGULA FERINA (L.). *Veres Nyak* (Red-neck).

Rather common on the lakes of the Mezöség, where Bieltz says they sometimes breed. We saw a few at Záh.

*259. FULIGULA NYROCA (Güld.). *Fehér-szemü Récze.*

Common. We saw them in flocks at Záh in the beginning of May; and it is not impossible that a few may remain to breed.

260. FULIGULA MARILA (L.). *Hegyi Récze* (Mountain-Duck).

Not rare during migration and in winter.

261. FULIGULA CRISTATA (Leach).

Sometimes occurs, during migration, in considerable numbers.

262. GLAUCION CLANGULA (L.). *Jég Récze* (Ice-Duck).

Not rare during winter on the larger lakes and rivers.

263. ŒDEMIA FUSCA (L.).

Occasionally appears in winter.

264. MERGUS ALBELLUS, L. *Ejszaki-sark Buvár* (North-Pole Diver).

Much the commonest of the family, and to be met with during winter in large flocks, and abundant in the middle of March.

265. MERGUS MERGANSER, L. *Muszka Récze* (Russian Duck).

Not rare on rivers during the winter months. Herr Csáto says it frequents the Strell in small flocks.

266. Mergus serrator, L.

Much rarer than the preceding.

Obs. "*Anas cana.*" This bird, which in the 'Erdelyi Muz. Egylet Évkönyvei' (vol. i. pt. 2, p. 63) is stated by Count Lázár to be new to Europe, is described in 'Verhandl. und Mittheil. des siebenb. Vereins für Naturwissenschaft' (10. Jahrgang, p. 244) by the same author as follows:—"As large as *A. querquedula*, but having a broader head. The head, neck, and upper parts are of a beautiful grey, like *Columba palumbus*; breast, belly, and underparts of wings snow-white. Native country India, especially Coromandel. . . . . ." In the spring of 1854 the author saw six of these birds at Benczencz, near Broos, one of which he got with great trouble, as they were extremely shy. Since then he has heard of, but not seen them.

This is of course not the well-known *Anas cana*, Gmel., from South Africa; but the description does not enable us to determine what the single example which seems to have been obtained could be. There is certainly no known species from "Coromandel" (or, indeed, anywhere in India) which agrees with the Count's. The so-called "Coromandel" Teal of many authors, *Nettopus coromandelianus* (Gmel.), is very unlike the bird described. We can only suggest that the bird may have been *A. marmorata.*

267. Pelecanus crispus, Bruch. *Szürke Gödény* (Grey Pelican).

Very rare. A male specimen was killed at Batiz, on the Strell, in 1850, by Herr Stetter.

268. Pelecanus onocrotalus, L. *Rózsás Gödény* (Rosy Pelican).

Rare, but has occurred at Hatzeg and at Reps, on the Alt near Hermannstadt, the Maros near Deva, the Külkül near Schässburg, &c. The specimen in the Klausenburg Museum was killed near the town. Boner (in his work, 'Transylvania: its Products and its People'), alluding to the periods of migration, says:—"At such times the Swan, the Cormorant, and the Pelican have also been seen on the rivers; and

Lieutenant * * * came home once bringing with him seven of the latter that he had shot." Stetter mentions that eleven were killed in one day at Hermannstadt; and Herr Ottó, that fifteen appeared on the Szamos in June 1864, and remained till the end of the month (Zoological Communications &c. *a.*).

269. GRACULUS CARBO (L.). *Szerecsen Gödény* (Negro Pelican); *Hal Farkás* (Fish-Wolf).

Rare, but is sometimes found on the larger rivers in winter. Herr Buda Ádám killed one near Russ, on the Strell, in August; and a young bird was shot near Hátzeg. The specimen in the Klausenburg Museum is from Felvincz. On 24th June, 1867, Herr Ottó shot an adult female at Felvincz; and again, on 24th July of the same year, seven were seen near Klausenburg, and two of them were shot."

270. GRACULUS PYGMÆUS (Pall.).

Not very rare. It generally appears in large flocks, and has been met with on the Alt and Strell. On the latter two young birds were killed in December at Brettye.

271. GRACULUS CRISTATUS (Faber).

Herr Buda Ádám says that it has occurred, but is very rare.

272. SULA BASSANA (L.).

Bieltz mentions that this bird was once observed during winter by Herr Stetter.

273. STERNA FLUVIATILIS (Naum.). *Halász* (The Fisher).

Not uncommon on the larger lakes and rivers. It is said to breed in the country.

274. STERNA ANGLICA (Mont.).

Herr Buda Ádám is our authority for the occurrence of this bird.

275. STERNA MINUTA, L. *Kis Halász.*

Rare. According to Bieltz it arrives in May, breeds in the country, and leaves in August. In the Strell valley it is very uncommon. A specimen was shot at Zeykfalva in June.

276. Sterna hybrida, Pall.

Herr Csáto says that several specimens were killed out of some small flocks which appeared in the Strell valley in June 1863. Herr Buda Ádám has also shot it near Hátzeg.

*277. Sterna leucoptera, Meisner & Schintz.

Not very common. We found them at Záh in company with the next species.

*278. Sterna fissipes, L. *Vizi Csóka* (Water-Jackdaw).

Common on the larger lakes and rivers. We saw many at Tóhát and Záh. Herr Ottó records having seen a flock of about 2000 on the 29th April in the Mezöség.

279. Larus ridibundus, L. *Nevető Sirály* † (Laughing Gull).

Not rare in spring. One was killed near Klausenburg during our stay there.

280. Larus minutus, Pall. *Kis Sirály.*

Not rare in the lakes of the Mezöség, where we saw it on various occasions, and shot an immature bird at Tóhát in the early part of May. Herr Csáto has observed them in the Strell valley during spring, but says they do not occur in autumn. The birds seen in the country are, no doubt, offshoots from the immense migratory flocks of this species which, as described by Mr. W. H. Simpson (Ibis, 1861, p. 362), frequent the freshwater lakes of the Dobrudscha preparatory to their flight northwards to their breeding-quarters on the great Russian lakes Ládoga and Onéga.

281. Larus tridactylus, L.

Rare. It has been observed in late autumn and winter.

282. Larus canus, L.

Rare, but is sometimes met with in stormy weather, and has been killed on the Alt, near Hermannstadt.

283. Larus argentatus, Gmel.

Very rare. A specimen shot at Déés is in the Klausenburg Museum.

---

† Hungarians call all Terns and Gulls "Sirály," from their mournful wailing cry.

284. Larus fuscus, L.

Rare, but has been obtained in various localities. There is a specimen in the Klausenburg Museum which was killed at Bethlen on June 19th, 1865; and both this and the two preceding species have been shot in the Strell valley.

285. Larus marinus, L.

Very rare. Herr Buda Ádám says that he has seen it at Hátzeg.

286. Stercorarius catarrhactes (L.).

Very rare. Bieltz mentions that a specimen which was killed at Hermannstadt in 1850 is in the collection of the Natural-History Society of that place.

287. Stercorarius parasiticus (L.).

This species is included in a List of Transylvanian birds in the collection of Graf Lázár.

288. Stercorarius pomatorhinus, Temm.

Solitary specimens occasionally occur in autumn. Bieltz says that there was one in the former College Museum of Nagy Enyed.

289. Thalassidroma pelagica (L.).

A few specimens have occurred during rough weather. One was killed by Herr Stetter in 1840 on the Maros.

290. Colymbus glacialis, L.

A few visit the country every winter.

291. Colymbus arcticus, L.

Commoner than the preceding in winter; and solitary birds have been seen during summer. Herr Csáto says that both the young and adult of this, and the young of the following species, have been killed in autumn in the Strell valley.

292. Colymbus septentrionalis, L.

A few occur in winter and autumn, but they are almost always young birds.

*293. Podiceps cristatus (L.). *Búbós Vöcsök.*

Very common on the lakes of the Mezöség. It comes in March, and leaves in October.

294. Podiceps rubricollis (Gm.).

Rarer than the preceding, and remaining the same time in the country. We probably saw them at Záh.

*295. Podiceps auritus (L.).

We found this bird common in the Mezöség; but it is reported rare in other parts of the country.

296. Podiceps nigricollis (Gm.).

Said to be rarer than the others, but not of unfrequent occurrence in various localities.

297. Podiceps minor (Lath.). *Kis Búvar* (Little Diver).

Not common, but of general distribution. All the foregoing species of this family occur in the valley of the Strell.

XXXVIII.—*Description of a new Flycatcher belonging to the Genus* Myiagra, *and Notes on some other Fijian Birds.* By E. L. Layard, Administrator of the Government of the Colony of Fiji.

Myiagra azureocapilla, sp. n.

♂. General colour above dark sombre blue; tail and wing-primaries black, the latter externally edged with the blue of the back; top of the head and cheeks from below the eye rich azure blue; a black band extends from over the nostrils and passes round the nape of the neck, including the eye in its breadth; chin, throat, and chest dark rich chocolate-brown, reddest on the chin; remainder of the underparts bluish white. Length 6″ 3‴, wing 3″ 3‴, tail 3″, tarsus 10‴, bill 9″. Beak orange; legs slate-colour; iris dark horn.

♀. General colour above chocolate-brown; top of head bluish; cheeks chocolate and white: tail and wing-primaries brownish black; the latter edged externally with the chocolate of the back; the former more or less tipped with white, most visible on the under side: chin, throat, and chest as in the male, but not so dark, being almost red. This colour extends down the flanks and tinges the remainder of the underparts, which are white. In the bill the upper mandible is dark horn, the under orange.

I propose to call this pretty Flycatcher *Myiagra azureocapilla,* from the lengthened azure-coloured feathers on the top of the head. It was first obtained by Mr. Liardet, in the north of the island Taviuni in this group, and near the same locality by my son, Mr. Leopold Layard. The latter informs me that they frequent the forest, perching on the lower trees. He never found them in the low country, but at an elevation of 600 or 800 feet. This is all covered with forest. They feed on insects, in search of which they were very restless and active. They were sometimes in pairs, at others solitary.

LAMPROLIA VICTORIÆ, F. & H.

Mr. L. Layard, who obtained several specimens of this singular bird, informs me that it creeps about in the lower growth of the thick saplings, and among the pendent thin lianas and vines in the very thick forest in the same locality as the *Myiagra azureocapilla.* Occasionally they descend to the ground and peck among the fallen leaves. When disturbed they flit among the lianas, at no great height, say 20 feet from the ground. He only saw one upon a tall tree. When chasing each other he heard them utter a sharp shrill twitter; at other times they were silent. Their food he found to consist entirely of small beetles. Bill and legs black, iris dark horn.

CHRYSŒNA VICTOR, Gould.

In the same locality he procured the "Orange Dove," and found, as I predicted, that the female and young male were green. The latter may be distinguished at any time from the female by the orange tinge on the head and plumage generally, and the deeper orange of the vent and under tail-coverts. Some of the settlers informed him that they had found young birds, fallen from the nest, entirely green. He also shot the full-plumaged orange male in amorous chase after the green female. They were in such a state of fat that he used the cuttings to grease his gun-barrel to keep it from rust.

He mentions seeing numbers of a small species of Parrot, of which he never could obtain a specimen, flying high over the trees. Once, and once only, he saw them settle on a cocoanut-tree. He says they appeared to be entirely green, and considerably less in size than *Lorius solitarius,* a small flock of which he once observed in company, but not mixing, with a flight of the others. This bird is probably unknown.

Taviuni is so unlike any other island of the group that I should not be surprised at many new things turning up there. I already know four or five species peculiar to it. The high mountain-forests of Viti Levu will also doubtless furnish some new and interesting species when ransacked.

XXXIX.—*List of Samoan Birds, with Notes on their Habits &c.* By the Rev. S. J. WHITMEE.

Part I. *Land Birds.*

1. STRIX DELICATULA, Gould. Samoan name *Lulu.*

Common to all the islands.

2. CORIPHILUS FRINGILLACEUS (Gmel.). *Sega=Senga.*

Very abundant on all the islands during a part of the year. The natives believe this bird migrates; but all I have been able to learn on the subject is, that they are seen passing in flocks from the western to the eastern islands. A few may be found all the year round; but during several months of the cooler season the cocoanut-trees swarm with them. They appear to feed chiefly on the nectar of the cocoanut-flowers; but when the *Erythrina indica,* Lamarck (a tree very common near the coast), flowers, about July and August, they may be seen about it in great numbers. Native boys are very expert at snaring the Sega on the cocoanut-trees. I have never heard of the bird breeding in Samoa; and the natives positively affirm that it does not. I have often obtained examples of this Parrakeet in immature plumage; but they are always nearly full-grown, and as strong on the wing as old birds. The Samoans are very clever at rearing and keeping birds; and they purchase the Fijian Shining Parrakeet (*Pyrrhulopsis splendens,* Peale) at high prices, and keep them many years; but they never succeed in keeping the *Coriphilus* alive more than a few weeks.

3. EUDYNAMIS TAITIENSIS (Sparrm.). *Aleva.*

This Cuckoo is, apparently, less abundant in Samoa than it is in many of the Polynesian islands. It is difficult to obtain here. I have never seen a living example, and have not succeeded in obtaining its eggs, or in learning any thing about them from natives. The bird is chiefly known to the Samoans as an example of arrant cowardice, owing to the fact that, when seen, it is almost always chased by a number of Jaos (*Ptilotis carunculata*), from which it tries to escape in the most precipitate manner. I scarcely ever hear the name of the Aleva mentioned by a native without some such remark as this: "The big bird that is chased by the little *Jao*!"

4. HALCYON PEALII, Finsch & Hartl. *Tiotala.*

Found on Tutuila only. I know nothing of its habits, except that it is a very noisy bird, somewhat resembling in that respect the Laughing Kingfisher (*Dacelo gigantea*, Lath.) of Australia.

5. HALCYON RECURVIROSTRIS, Lafr. *Tiotala.*

Found on Upolu and Savaii. Very common. A noisy bird, with a loud saw-sharpening kind of note, but less noisy than its Tutuila congener. It forms its nest by pecking a hole in the nest of the *Termes arborum.* It appears to lay only two eggs.

6. COLLOCALIA SPODIOPYGIA, Peale. *Pe'ape'a=Pehapeha.*

This Cave-Swallow is found all over the islands, but is not often seen except in certain localities. On the 25th November last I visited a cave where it was plentiful. I found a number of nests, all built entirely of moss. Every recent nest had one young bird in it. In no instance could I find an unhatched egg. The young were mostly unfledged. From the number in the same stage of growth, and the absence of eggs, I fancy these Swallows must breed very uniformly as to time. As I found one young bird in every nest, I conclude that they lay only one egg.

7. Myzomela nigriventris, Peale. *Tolai-ula.*

Common near the coast on all the islands. I have not seen it far inland. It frequents the trees about the villages. On several occasions one has come inside my house; but when it enters a house, I believe it is to take refuge from the pugilistic *Ptilotis carunculata,* which may frequently be seen chasing it. The male is one of our most showy birds. I have never yet succeeded in obtaining its nest and eggs.

8. Ptilotis carunculata (Gmel.). *Jao.*

One of our most common birds. Most abundant near the coast and about dwellings. It is a very lively bird, and a desperate fighter. It chases birds of any size. I have mentioned the *Eudynamis* and the *Myzomela* as being chased by it. I once had a *Cacatua galerita* which was greatly tormented by this bird. I have also obtained living examples of the *Sturnoides atrifusca* (a very powerful and bold bird) and the *Ptilonopus fasciatus,* which had been driven by the *Ptilotis* until they sought refuge in a house, or were so much distressed as to be easily caught in the bush. It takes great delight in tantalizing cats, as I have often observed to my amusement. Although a honey-sucker, it by no means feeds exclusively on nectar. I see it every day searching the orange-trees and the shrubs in my grounds for caterpillars, spiders, &c., and have seen it eat very large caterpillars. The nest of this bird is pretty well represented in Hartlaub and Finsch's work (pl. i. fig. 1); but the egg (pl. i. fig. 2) is incorrectly coloured: the ground should have a deeper red tinge, and the spots should be much more sparsely distributed.

9. Leptornis samoensis, Hombr. *Ma'oma'o = Mahomaho.*

Found throughout the islands, but rarely seen near the coast. I know nothing of its nesting. There is a good deal of superstition in the native mind connected with this bird. It has a peculiar wailing kind of cry, which may, under the influence of superstition and fear, be interpreted into language. When travelling in the bush with natives, they have frequently said it was going to rain, *because* the *Ma'oma'o* was crying. For my part, I always think the appearance of rain-clouds calls their attention to the note of the bird; for it appears to me to make as much noise in fine weather as in wet. More than once have I known the note of the bird to be interpreted into a prediction of some calamity, or into an oracular deliverance.

10. PETRŒCA PUSILLA. Peale. *Tolai* and *Tolai-fatu.*

This little bird is very common in all parts of the islands. I have more frequently seen it and *Rhipidura nebulosa* in the mountains than any other bird; and it is abundant on the coast. It has a note more nearly approaching to a song than most of our birds.

11. MERULA VANICORENSIS, Quoy. *Tūtūmalili.*

Common in the bush. There is no living object in Samoa which gives me so much of *home* feeling as this bird. It flies low before one for short distances, with the peculiar Blackbird note, exactly as its congener does along the English hedgerows. The only thing lacking is the English Blackbird's song. Its nest is very similar to that of the English Blackbird, except that it is rather smaller, to suit the smaller size of the bird; and, unless my memory fails me since my birds'-nesting days, the eggs of the two might almost be interchanged without the error being detected, except that the Samoan egg is perhaps the smaller of the two. The figure of the *Merula's* egg in Finsch and Hartlaub's work is very incorrect.

12. RHIPIDURA NEBULOSA, Peale. *Se'u=Sehu.*

This bird is very frequently met with in the bush. It always amuses me by its self-important fussy manner as, with tail widely expanded, like a fan, and wings partially expanded and drooping, it hops from branch to branch of the bushes. It is constantly on the move, flies short distances, and seems to delight in keeping company with travellers. It utters a short twittering note at short intervals. This and the pretty little *Petrœca pusilla* often afford me much amusement when riding alone in the bush. The nest is a very thin structure built of grass. An egg is figured in Hartlaub and Finsch's 'Birds of Central Polynesia' (pl. i. fig. 6).

13. Myiagra albiventris, Peale. I have not found a Samoan name for this.

Only occasionally seen in the bush. As far as my own observation goes, I think it is rare. I have exhibited the bird to a number of natives, and none know any name for it. Some even say they have never observed it before. I have noticed it stationed on a branch in the peculiar watchful attitude of the Flycatchers, and darting after any passing insect. I have never procured its nest or eggs.

14. Pachycephala icteroides, Peale. *Vasavasa.*

Common. This bird approaches nearest to a song-bird of any in Samoa. In fact it has a very pretty note, which is sustained for a length of time. I was once asked by a gentleman if I had lost a Canary, because he had observed a yellow song-bird on the trees of his garden. While we were talking of it the bird returned, and I recognized the *Vasavasa.* I have heard other people remark how like its note is to that of a rather poor-singing Canary. I have long wished to try and keep it as a cage-bird, but have never succeeded in procuring young from the nest, or an uninjured adult bird.

15. Lalage terat (Bodd.). *Miti, Miti-sina,* and *Miti-tai.* This is very common about the villages—I think, the most common bird we have. It may be constantly seen hopping about the ground and picking up grubs &c.

16. Aplonis brevirostris, Peale. *Miti-uli* and *Miti-vao.* This bird, as one of its Samoan names indicates, is confined to the bush, *Miti-vao* meaning Bush-Miti. The native names of animals often have some meaning in reference to their appearance or habits. I know nothing of the habits of this bird, except that it appears to lay only two eggs.

17. Sturnoides atrifusca, Peale. *Fuia.*

A very common and exceedingly bold bird. It levies heavy contributions on all our fruit-trees. We can scarcely keep any fruit on the trees to ripen (except oranges) without having it injured by the *Fuia.* It comes close to the house, and even commits its depredations before our eyes. The yellow Guava

(*Psidium guaiava*) has spread in some parts of the islands and become a pest; and to the *Sturnoides atrifusca* I attribute the chief blame. It is exceedingly fond of this fruit, and distributes the seeds in its excrement in all parts of the bush. The Fuia's note is not unlike that of the common Starling (*Sturnus vulgaris*), but is louder, and heard chiefly early in the morning. Eggs pale blue.

18. ERYTHRURA CYANOVIRENS, Peale. *Segasegāmau'u.*

This bird is not uncommon, but is often difficult to find. It evidently migrates from place to place, according to the time of flowering of certain trees. It is seldom to be seen near the coast, except when the *Erythrina indica* is in flower; but at that time (July and August) it may be seen in flocks feasting, with the *Coriphilus fringillaceus*, upon the nectar produced in its showy red flowers. In May of last year I noticed a great number about a clump of ironwood trees (*Casuarina equisetifolia*) then in flower.

19. LOBIOSPIZA NOTABILIS, Hart. et Finsch. *Sega-vao* (?) =*Senga-vao.*

I think this bird is uncommon. I have seldom seen it. The natives have brought me dead examples. They usually confound it with the preceding species (*Erythrura cyanovirens*); but some distinguish it, and apply to it the name given above—*Sega-vao.* Once I saw it in the Savaii mountains, and I have also procured it on Upolu*.

20. PTILONOPUS PEROUSII, Peale. *Manu-mā* (male), *Manu-lua* (female).

This beautiful bird is not often seen; but it is not uncommon. It frequents certain trees, and may be always found if one knows its habit. Its principal habitat is the indigenous banyan (*Ficus prolixa*), which grows very high; and one has to watch carefully in order to see the birds, although the tree may be full of them. This *Ptilonopus* is considered by the natives to be a delicate bird and difficult to keep alive for any length of time in confinement. The male and female are very different in plumage; and I feel fully convinced that it is the female of this species which is known as *P. apicalis*, Bp. The natives have also regarded it as a distinct species, and call it *Mānu-lua*.

---

* [In a letter addressed to the Zoological Society, Dr. Hartlaub states that he and Dr. Finsch had come to the conclusion that this supposed species is probably the young of *Amblyura cyanovirens* (*Erythrura cyanovirens*). See P. Z. S. 1875, p. 269.—ED.]

21. Ptilonopus fasciatus, Peale. *Manu-tagi.*

This is very common all over the islands. *P. perousii*, I consider to be decidedly gregarious, but this species not so. In fact it seems unable to keep the peace in company with other birds, whether of its own or other species. It is easily tamed and is hardy. The natives keep a great many tame ones. These they formerly used very extensively as decoys; but since the general use of firearms they are rarely so used. For decoying wild birds a trained bird was placed in a large cage, with a rather long narrow neck, open at the top. The body of the cage was made to bulge considerably at the lower part. When taken into the bush the cry of the caged bird soon attracted a wild one. This settled on the rim of the cage's open neck, whence it soon descended into the cage and commenced fighting. The birdcatcher, concealed near, then easily secured it, as it could not fly *up* the narrow neck which it had no difficulty in darting *down*. This cage bids fair to give us an example of the "survival" of an object after its primary use has been superseded, which is so common, and is so instructive to the ethnologist. I notice that Samoans continue to make their cages in this way at the present time without any intention of putting them to the old use, or without even thinking why that particular form was first adopted.

22. Columba vitiensis, Quoy. *Fiaui.*

This Pigeon is found on Upolu and Savaii; I have also seen it on the small islands in the straits (Manono and Apolima). It is only occasionally seen. The natives do not seek it as an article of food, the flesh being very inferior to the *Carpophaga pacifica*. I feel quite convinced that *C. castaneiceps* of Peale is not a good species, but that it ought to be regarded as a synonym of *C. vitiensis.* This opinion, however, is based on negative evidence alone. I have seen a good many birds which were all referable to *C. vitiensis*; one of Mr. Godeffroy's collectors, who has obtained many birds on Upolu, tells me he has never found *C. castaneiceps*; and the natives only know the one species. I believe no one since Peale has found birds referable to his species; but on this point my information may be deficient. The only description of the bird accessible to me is that given by Finsch and Hartlaub; and from this I am inclined to think Peale's species was founded on an individual peculiarity, or on immature examples. I intend to give further attention to the subject, and to compare a number of examples.

23. CARPOPHAGA PACIFICA (Gmel.). *Lupe.*

This fine Pigeon is exceedingly abundant in all the islands. During the season a good shot will bag two or three dozen in a few hours. They are highly prized both by natives and foreign residents as an article of food; and when in greatest perfection they are so fat that they often burst in falling from the high trees on which the natives shoot them. They furnish a not altogether despicable substitute for game. When travelling in the islands I have known as many as sixty served by a village to my boat's crew for their dinner. The Lupe migrates from place to place, according to the fruiting of certain trees. The natives know where to find it by the fruit which is in season. At the present time (April) it feeds on the fruit of the Maota (*Dysoxylon*, sp.) and Mosooi (*Cananga odorata*, J. Hook.), and it is found only where these trees are plentiful. When it is in best condition it feeds on the fruit of the Tavai (*Rhus taitense*, var. *tartense*, Guil.). This tree is plentiful within a short distance of the coast all over the islands, and it fruits very abundantly; hence the Lupe is easily obtained at the time of its fruiting. There are many other trees upon the fruit of which it feeds, among them the nutmegs (*Myristica*, sp.) and the *Faradaya powelli*, Seem. The fruit of the latter is known as the *Mamā-lupe*, which means "the Pigeon's mouthful."

Many Samoans believe the *Carpophaga* migrates beyond the Samoan group during the rainy season, while others maintain that it remains here the year through, but is at that time scattered in the mountains. There is something to be said in favour of both views. It is seen to migrate in flocks between the Samoan islands. This is well observed on the small islands of Manono and Apolima, which lie between Savaii and Upolu. On their way across the straits they stay a few days on these small islands. They are also seen to pass from the eastern end of Upolu to Tutuila. These observed migrations, as far I can learn, are all from west to east. As these Pigeons are known to pass from island to island when the distance is (in two instances) about forty and sixty miles respectively, of course they may go further. But, on the other hand, it is certain that some are always to be found, in almost any part of the bush, during the period when they are supposed to be away at other islands. Hence many natives maintain that the comparative scarcity in any one part is owing to their wide distribution about the islands, and to the fact that they are not, at this season, gregarious. I know, as a matter of personal observation, that Pigeons are frequently to be met with during the rainy season, and that they are then solitary. It is also certain that some, at least, breed in Samoa. Eggs are found at the time when the birds are in best condition (July to September); and from about August and September young Pigeons are shot. Eggs and young in the nest are very seldom taken; but this is owing to the habits of the natives, who say, "What is the use of birds' eggs?" and never look for them. The Samoans are also the worst tree-climbers I have ever met with. With the single exception of the cocoa-nut palm, they seldom can be induced to climb a tree. All I have met with who have seen the egg and young of the Lupe, maintain that it never has more than one egg at a time.

The migration of this Pigeon at definite times *in search of food* (whether it goes to and fro between this and distant groups or not) appears to me to throw light on the general subject of bird-migration, which has lately engaged the attention of some naturalists in Europe.

Before the introduction and general use of firearms in the islands, Pigeon-catching used to be a matter of great importance in Samoa. The population of whole villages would go into the bush with decoy-birds, and spend weeks together in the occupation. During this time they lived in bush-huts, and subsisted almost entirely upon the Pigeons caught. This mode has been completely superseded by the use of the gun; but tame Pigeons, such as were then used as decoys, are still kept by many of the people, and they are still taught to fly in a circle at the length of the string by which they are tethered. These tame Pigeons are great pets, and almost always take their food from the mouths of their owners. The Samoans imitate very cleverly the coo of this Pigeon, and generally find out where they are, when out shooting, by cooing so naturally that the birds answer them.

24. PHLEGŒNAS STAIRI, Gray. *Tu-tautifa,* male; *Tu-aimeu,* female.

The male and female of this bird have always been regarded by the natives of these islands as distinct species; hence they, like the male and female of the *Ptilonopus perousii,* have been known by distinct names. From an examination of living birds I was of opinion that they were male and female of one species. I have only examined two dead examples; but a collector in my neighbourhood has examined several of both kinds, and his observation confirms my opinion: the dark purple-breasted birds all prove males, and the paler uniform-coloured birds all prove females. Additional proof is just now afforded by a pair in confinement: these have paired, and the hen is now sitting on two eggs; the cock is very attentive to his mate, keeping at a safe distance from her nest two examples of *Ptilonopus fasciatus,* which occupy the same cage. I forwarded a living example of the female to Sydney last year, to be sent to the Zoological Society's gardens. At that time I thought it was the female of this species, but was not certain. I have recently sent a skin to the Rev. Canon Tristram. If the differences between the male and female have not been made known, perhaps one of these may serve for description. The bird is widely distributed in the group, but is not very frequently met with.

25. Didunculus strigirostris, Jard. *Manu-mea.*

I have recently contributed some notes on this bird to the 'Proceedings' of the Zoolocical Society (*vide* P. Z. S. 1874, p. 183).

26. Rallus pectoralis, Less. *Ve'a=Veha.*

Very common, especially near the coast and about the plantations of the natives.

27. Ortygometra quadristrigata, Horsf. *Vai.*

I have never seen a living example of this bird, and have had great difficulty in procuring a single dead one. This is not because the bird is scarce, but because it hides so closely in sedges and reeds in swamps and by streams that the natives have a difficulty in getting a shot at it. I have often heard its cry, and I believe it is found about water in all parts of the islands.

28. Porphyrio indicus, Horsf. (? *P. vitiensis,* Peale). *Manu-alii.*

Common all over the islands. I am strongly inclined to think that our Samoan *Porphyrio* ought to bear the specific name of *vitiensis* instead of *indicus.* This bird seems easily to accommodate itself to varying conditions. It is hardy in captivity, and will feed upon any thing which comes in its way—vegetables, cooked or raw, cockroaches, rats, and lizards; and I have known one recently to attack and eat a wounded *Strepsilas interpres.* This is in the possession of a collector in my neighbourhood, who, having shot and wounded the *Strepsilas,* placed it in the cage with the *Porphyrio,* which attacked it immediately. The *Porphyrio* is not only found about swamps and lakes, but is common in the bush far away from water. It frequents the *taro* plantations, and in some parts feeds largely on that vegetable.

29. Pareudiastes pacificus, Hart. et Finsch. *Puna'e=Punahe.*

I have not learned any thing more of the habits of this bird since the date of my notes on it already communicated to the Zoological Society (*vide* P. Z. S. 1874, pp. 184, 606).

The following, which are included among Samoan birds by Hartlaub and Finsch, are omitted in the foregoing list because I have no certain personal knowledge of them. Some, I think, I may yet obtain; others, I think, are incorrectly attributed to Samoa; and others are doubtful species:—

1. MYZOMELA JUGULARIS, Peale; 2. TARTARE LONGIROSTRIS (Gmel.); 3. MYIAGRA CASTANEIVENTRIS, Verr.; 4. PACHYCEPHALA FLAVIFRONS, Peale; 5. P. ALBIFRONS, Peale; 6. AMADINA OPTATA, F. & H.; 7. PTILONOPUS APICALIS, Bp.; 8. COLUMBA CASTANEICEPS, Peale; 9. MEGAPODIUS STAIRII, Gray; 10. ORTYGOMETRA TABUENSIS, Gmel.

Of these, *Ptilonopus apicalis, Columba castaneiceps,* and *Megapodius stairii* may be safely regarded as synonyms of *P. perousii, C. vitiensis,* and *M. pritchardi,* Gray, respectively. The type of *M. stairii* was, I believe, *sent* from Samoa, but was *brought here* from the island of Nina-fou, where *M. pritchardi* exists. If I am correct in this, then the former name has the right of precedence. I also believe that Peale's *Pachycephala flavifrons* is not distinct from his *P. icteroides.* The Samoan name which he gives for the former, "Vassi-vassi," does not exist in the dialect; but it is evidently an incorrect form of "Vasa-vasa," the name of *P. icteroides.* I doubt whether *Tartare longirostris* is correctly attributed to this group. The other five species I hope still to find. I believe I lately saw *Myiagra castaneiventris* in the bush. When I obtain further information, I hope to continue my list, and to include shore- and sea-birds.

Upolu, April 2nd, 1875.

XL.—*On the Contents of a second Box of Birds from Hakodadi, in Northern Japan.* By R. SWINHOE.

I SHOULD like to record in the forthcoming number of 'The Ibis' that I have just received a second box of birds from Mr. Thomas Blakiston of Hakodadi, N. Japan, together with a letter of notes on the ornithology of that locality. Any species now received for the first time I record with numbers following consecutively those of my paper in 'The Ibis' for April 1874. The last number therein given was 68.

69. Falco subbuteo, L.

Blakiston notes the length of fresh birds:—Sept. ? ♂, length $11\frac{3}{4}$ inches, wing $10\frac{1}{8}$; and Sept. ♂, length $12\frac{1}{4}$, wing $10\frac{1}{2}$. He says, "an August male differs in having unspotted chestnut thighs, and more slate-colour on back; and seems to agree with *F. rufipes* of Yarrell." This will probably be *F. amurensis*, Radde. Blakiston also has the skins of what he takes to be *Accipiter nisus*. One has five bars on the tail-feathers, except outer ones, which have six; and one has four bars, and seven bars on the outer ones. He has seen a specimen of *Bubo maximus* killed. He has sent a male Hen-Harrier and two small Owls. The Harrier has some dark lines on the sides of its body; but Mr. R. B. Sharpe considers it of the European type, and not of the American; so I add it as

70. Circus cyaneus, L.

71. Scops stictonotus, Sharpe, Cat. B. ii. p. 54, t. iii. f. 1.

A September female. Blakiston has two other females, shot in the same month, and says that they all agree with his Canton specimens. The bird sent agrees with mine from China. Mr. Sharpe considers my larger Owl, mentioned in 'The Ibis' 1874, p. 434, to be the true *S. japonicus*, T. & S.

72. Scops semitorques (T. & S.).

The male bird received seems very small. Blakiston gives the length when fresh-killed as $8\frac{7}{8}$, wing $6\frac{3}{8}$. He writes that he has also a male of *Otus brachyotus*, procured at Hakodadi, which agrees with his Canton specimen. He has also got one skin of *Caprimulgus jotaka*.

73. Chætura caudacuta (Lath.).

Two males, one of September, the other of August, and a female of August. Blakiston gives their measurements at $7\frac{1}{8}$ to 8, and that of their wings from $7\frac{3}{4}$ to $8\frac{1}{4}$.

Chelidon blakistoni. No. 3 of former list.

Two males and one female sent this time, all procured in

April. Blakiston's measurements—length 5 to 5¼, wing 4 to 4½. Two of these are dingy on the underparts, especially on the breast

74. CERYLE GUTTATA, Vigors (*lugubris*, T. & S.).

A male of January. Blakiston gives length 15¼, wing 7½. This is whiter in plumage than ordinary. I have a female from Ningpo, and I cannot distinguish between specimens of *C. lugubris* and *C. guttata*.

75. LOCUSTELLA LANCEOLATA, Temm.

A female of this bird, shot in August at Hakodadi, has come to hand.

76. RUTICILLA AUROREA (Pall.).

A female of this has also come.

77. ANTHUS JAPONICUS, Temm. & Schleg.; Bp. Consp. Av. p. 248.

Blakiston has sent a pair of Pipits, with the note that they measure in length from 6⅛ to 6¾, and their wing from 3¼ to 3½—which are decidedly of this species, and prove its validity and distinctness from either *A. aquaticus* or *A. cervinus*. From the Museum of St. Petersburg I received in exchange an Amoor specimen marked *A. japonicus*, which turned out to be no other than true *A. aquaticus*. This misled me; and when latterly at Ningpo I came across similar birds, I was under the impression I had found the Japanese species in China. On bringing them to England I learnt that they were nothing but ordinary *A. aquaticus*. I wrote to Leyden, and asked what *A. japonicus* really was, and begged for a specimen. I was told in reply that it was simply the winter plumage of *A. cervinus*. And to think that after all it should turn out a good species! It bears a strong resemblance to certain specimens of *A. aquaticus*, but it may be at once recognized by the clear round black spots on its breast. Even Mr. Dresser acknowledges its distinctness as a species.

78. CINCLUS PALLASI, Temm.

A pair of this Dipper have come. The specimens are not distinguishable from Chinese examples. Blakiston gives the length 7¼ to 8¾, wing 3½ to 4¼.

79. LANIUS SUPERCILIOSUS, L.

Mr. Blakiston sends a male of this under the head of *L. bucephalus*, noting that it seems larger. He gives the size of that species :—♂, length 7⅜, wing 3⅜; ♀, length 7½, wing 3⅜. He writes of this last, "identified in 1862." From a reference to 'The Ibis' for that year, I imagine that both his sexes must be in immature or female plumage, as he only had a female when he wrote his paper "on the Ornithology of Northern Japan" (p. 317). This idea of mine seems to be confirmed by the fact of his sending an adult male of

80. LANIUS BUCEPHALUS, T. & S.

Sent as a specimen of *L. superciliosus*. The size of this is given as, length 7⅞, wing 3½. This is the first male individual of this species that I have seen.

81. GARRULUS BRANDTI, Eversm.

A pair of these have come to hand with this note of measurement—length 12¼ to 13⅛, wing 6⅝ to 7½.

82. LEUCOSTICTE BRUNNEINUCHA (Brandt).

A pair.

83. LOXIA ALBIVENTRIS, Swinh. P. Z. S. 1870, p. 437.

A pair of Crossbills with white bellies, just like the North-Chinese bird. Blakiston gives as measurements from the flesh, 6⅛ to 6¼ × 5¾ to 5⅝, and adds, "I have one more specimen, 6⅜ × 5⅜, ♂, October. The bill is stouter than in the example I send you, but there are no other remarkable differences."

84. EUSPIZA VARIABILIS, T. & S.

One specimen has come, with the note :—"Two just alike, October ♂, 5⅞ × 3." This is the first I have seen of this species, extraordinary for its whole-coloured outer rectrix. Blakiston reports having a May specimen of *Emberiza personata* with a black face. This peculiarity is, I believe, the origin of the name—just as *E. melanops*, Blyth, is a synonym for the allied *E. spodocephala*, Pall., of Eastern Asia and China.

85. Euspizia aureola (Pall.).

"One specimen only. Compared with Chinese example" (*Blakiston*). He sends a distinct form of Reed-Bunting with Bullfinch-like bill for a second of his *Schœnicola yessoensis* (Ibis, 1874, p. 161). The specimen is a male in winter plumage, and looks much like a diminutive specimen of *S. pyrrhuloides* of Europe. I have never met this form in China; and it is desirable to get the spring and adult plumage before describing it. It bears to *S. pallasi* the same relation that *S. pyrrhuloides* does to the home Reed-Bunting; but *S. pallasi* has not yet occurred in N. Japan.

Blakiston asks if Whitely was right in his identification of *E. sulphurata*, as it has not occurred to him. Mr. Whitely, of Woolwich, says he is sure his son was. I can only say it is a common winter visitant to Amoy, in China.

Plectrophanes nivalis (L.).

"Still only one specimen" (*Blakiston*). None sent.

86. Dryocopus martius (L.).

A male and female sent. "Female specimen sent has scarlet on nape only" (*Blakiston*).

87. Gecinus canus (L.).

Two males sent, with small bills, but not otherwise different. "Is there any chance of there being another species here" (*Blakiston*)? The *G. awokera* (T. & S.) will in all probability occur there also, as in places in Europe both *G. viridis* and *G. canus* are found together.

88. Picus major (L.).

A female sent. "Identified in 1862" (*Blakiston*).

89. Picus leuconotus, L. (*uralensis*).

A male sent. "Identified in 1862" (*Blakiston*).

90. Picus kisuki, T. & S.

"Identified in 1868" (*Blakiston*). A male sent.

91. Cuculus canorinus, Cab.

A male sent of this Eastern Cuckoo, the same as we get as a summer visitant in China.

92. VINAGO SIEBOLDI, T. & S.

"Saw this bird several times this last autumn when on the S.E. coast of Yezo—and had one skin; but unfortunately the Crows carried it off when drying outside the house in the sun" (*Blakiston*).

93. PHASIANUS VERSICOLOR, T. & S.

A male and female sent. "♂, $31\frac{1}{4}$ to $32\frac{1}{2} \times 9$ to $9\frac{3}{8}$; ♀, $23\frac{3}{8}$ to $24\frac{1}{4} \times 8$ to $8\frac{1}{4}$. Have a male which has fragment of white collar on neck" (*Blakiston*).

94. COTURNIX JAPONICA, T. & S.

Two males, identical with Chefoo specimens (Ibis, 1875, p. 126).

95. SQUATAROLA HELVETICA (L.).

I can see no difference between Japanese, Chinese, and home specimens.

96. CHARADRIUS VIRGINICUS.

With a *C. fulvus* ♀ of May, with the belly partly moulted black, a male marked July, with dark bars on sides of belly only, and a female of September, with unmoulted underparts, of apparently *C. virginicus* have come to hand. Blakiston writes, "I think I have two species." The latter skins have certainly smaller golden spots on the upper parts, shorter wings, and longer toes; but the two so-called species require close comparison for discrimination, and I should think that individuals in life must often be puzzled to know whether the "stranger" bird be a "brother or a cousin."

Blakiston adds, while sending three more specimens of *Ægialitis placida*, G. R. Gray, "I have four other specimens, $8\frac{1}{4}$ to $8\frac{3}{4} \times 5\frac{1}{2}$ to 6."

97. ÆGIALITIS CANTIANA.

One in winter plumage, like our winter visitant in China.

98. ÆGIALITIS DUBIA (Scop.).

"Only one specimen, ♂, $6\frac{3}{4} \times 4\frac{3}{8}$. Seems to agree with Chinese examples of *Æ. philippensis*" (*Blakiston*).

Blakiston mentions another species that he has, with a "chestnut forehead, back of neck, and breast; dark feet; no collar. One specimen, full plumage, one female, $7\frac{5}{8} \times 5\frac{1}{4}$."

What this species is puzzles me! It appears allied to *Æ. bicincta* (Gould) and *Æ. ruficapilla* (Gm.), both from Australia, but seemingly distinct.

Hæmatopus osculans, Swinh. P. Z. S. 1871, p. 405.

Blakiston remarks, "Only one male, 17 × 10½. Bill from forehead 3¼. White commences on third quill, only three tail-coverts tipped with black."

Totanus glareola, L.

"Identified by you by specimen in 1873" (*Blakiston*). A skin of this species received. He adds that he has only two specimens of

99. Totanus ochropus, L.

They were identified by me in 1862. He now sends spring and autumn examples of *T. incanus.*

100. Totanus glottis, L.

A female of October from S. Yezo. Measurements given, "13½ × 7."

101. Totanus fuscus, L.

A male of October from S. Yezo, "12 × 6½."

He also sends spring and autumn examples of *Tringoides hypoleucus,* which I can match from my China series.

102. Limosa uropygialis, Gould.

One of this species has arrived with the note, "Patched rump, males 14¾ to 15¾ × 7⅞ to 8⅝, bill 3 to 3⅝; one female 16⅞ × 8½, bill 4."

103. Limosa brevipes, G. R. Gray.

Also one of this, with the note, "White-rumped, only two specimens, males, 14¼ to 14⅝ × 7¾ to 8⅛."

A spring and an autumn specimen of *Gallinago australis,* showing that the latter is more rufous on the dark parts. This appears to be due to some seasonal change in the species.

He has also a spring specimen and an autumn one of this common Snipe, and writes, "all darker in autumn." Their spring bird is our *Gallinago scolopacina* in ordinary dress, with white underparts; but the autumn bird is considerably barred and marked with shades of brown on the sides of the underparts. This form of plumage I thought I knew in *G. scolopacina*. I had frequently met with it in China in autumn, but more or less occasionally in other months. I turned up a specimen of both forms, shot near Pekin, in September. I thought it might be *G. major*, Steph. (Schleg. Mus. d. Pays-Bas, ii. p. 7); but that is "Très-reconnaissable aux trois paires externes des rectrices blanches, avec environ 3 barres foncées à la partie basale des barbes externes." I carefully examined the tails of my two Pekin specimens, and found them resembling one another, of 14 rectrices each, of the ordinary form; and the under wing showed less white than usual, but not so little as the Japanese. The latter is certainly distinct from ours, and not the same bird in the dark-sided plumage, which I find some of my *G. stenura* and *G. megala* have affected. I fortunately possess a *G. wilsoni* from Canada; and this tallies completely with Blakiston's specimen, except that it is a little larger in all its measurements. The rectrices of both are similar and narrower than ordinary; but otherwise the form of the Common Snipe, even to the spatulate expansion towards the tip of bill, is retained throughout. I would note them under a consecutive number,

104. GALLINAGO WILSONI, Temm.

A female procured at Hakodadi in September. Distinguishable from *G. scolopacina*, which it resembles in form, by its axillaries being barred *uniformly* with black and white.

"*Macrorhamphus* (?), one specimen, Oct., ♀, $11\frac{3}{8}\times5\frac{15}{16}$, bill $2\frac{3}{4}$. Legs and feet olive; bill darker olive, and dark horn-colour near the tip; outer toe webbed to first joint; upper mandible resting *in* lower till near the tip, and one tenth longer. Long scapulars like Sandpiper's. Centre of back white. White shafts to outer quill-feathers. Killed in company with Golden Plover." The above description shows Blakiston's bird to be rather the American bird than our allied *M. semipalmatus*, Jerdon. No specimen has come forward.

105. CALIDRIS ARENARIA (L.).

One skin of this cosmopolitan bird.

106. Lobipes hyperboreus (L.).

One of this Phalarope, with the note "I only have two."

107. Tringa acuminata (Horsf.).

One skin.

108. Tringa cinclus, L.

Three of these; one with a partly black belly, and otherwise in part summer plumage.

Note, "*Tringa* —— ? Something like 1512" (under that number *T. acuminata* was sent), "longer bill, smaller feet; only one specimen." This may be *T. maculata,* Vieill.

109. Tringa albescens, Temm.

A spring and an autumn specimen; the former with rufous under neck and part summer dress.

110. Tringa damacensis (Horsf.).

Two autumn specimens of this species.

Eurynorhynchus pygmæus.

Blakiston reports one specimen of this killed in September, and gives an unmistakable figure of its bill.

111. Ibis nipon, T. & S.

A full-grown immature grey specimen of this species has come, with the note, "Adult male, April, 30 × 17¾; adult female, April, 31 × 15⅞."

112. Botaurus stellaris (L.).

A female of this Bittern, shot in May, with the note, "28¼ × 12⅜ (length perhaps doubtful); female shot in June, 22 × 11." He adds, "I have ♂ and ♀ of the Little Bittern you spoke of with spotted female." My *Ardetta eurhythma* (Ibis, 1873, p. 73).

He sends adult and immature of *Porzana erythrothorax,* T. & S. (51 of my former list, Ibis, 1874, p. 163), and speaks of two more—one that he takes to be Baillon's Crake, and the other with "brown-and-white-spotted throat and breast." which likely enough will turn out to be my new *P. exquisita* (Ibis, 1875, p. 135).

113. **Podiceps philippensis** (Bonn.).

One of this shot in South Yezo, with note on label, "$9\frac{3}{8} \times 4\frac{1}{8}$."

Podiceps cornutus, Gmel.

One of these in winter plumage, and a *P. nigricollis* in summer plumage, marked "♂, April." This last I received before, and recorded in my first list, No. 53.

Colymbus septentrionalis, L.

"Only one specimen, with red throat. *C. arcticus* (?) with black throat; and only one specimen of *Mergus albellus*."

114. **Mergus serrator** (L.).

A female sent.

115. **Mergus castor** (L.).

A male and a female.

116. **Cygnus musicus**, Bechst.

A skin of this is sent, with note, "adult male, $55 \times 22\frac{1}{2}$."

117. **Anser segetum**, L.

Two skins received, with the note, "These two specimens killed out of the same flock; others measure up to $35 \times 20\frac{1}{4}$, and bill up to $2\frac{3}{4}$ along edges." This settles the question of the variability of this Goose, and confirms what I ascertained of my own experience in my late residence at Ningpo, China.

118. **Anser brachyrhynchus**.

A specimen sent marked "♀, October," with the note, "One specimen, $27\frac{3}{8} \times 16\frac{1}{4}$, bill 2; did not see this when fresh, but bill and feet appear to have been flesh-colour; otherwise is a perfectly small edition of the last." I have never procured this species in China.

119. **Anser albifrons**, Gmel.

A male of April, with note, "Two specimens only, both ♂, in April, $27\frac{3}{4}$ to $28\frac{3}{4} \times 16\frac{1}{4}$ to $16\frac{1}{2}$."

"*Anser erythropus* (?).

"A female, October, $21\frac{1}{2} \times 14\frac{3}{8}$, bill $1\frac{1}{4}$; otherwise a small edition of the last." No specimens sent.

120. **Spatula clypeata** (L.).

A young male sent.

121. **Mareca penelope** (L.).

A female sent.

122. **Aix galericulata** (L.).

A female sent.

123. **Œdemia fusca** (L.).

An adult and an immature bird sent, with the note, "I send two specimens from Hakodadi, measuring 20¼ to 21 × 10½ to 11. I also send my Yangze specimen, shot at Chinkiang in February, ♂, 20 × 10½." This last turns out to be *Œ. velvetina*, Cass., the American form of the present species, and not *Œ. americana*, allied to *Œ. nigra*, as I stated before (P. Z. S. 1871, p. 419).

"I am pretty certain we have *Œdemia nigra*. I saw numbers of Scoters along the S.E. coast last autumn, in which I could detect no white at all. They keep up an incessant low whistling noise." I suspect, however, that it will turn out to be the American allied form of *Œ. nigra*, as I have this last from Kamtschatka.

124. **Fulix marila** (L.).

Two specimens sent.

125. **Fulix mariloides** (Vigors).

One specimen of this sent, agreeing with specimens procured by me at Ningpo, which I sent some home alive to the Zoological Society's Gardens (see P. Z. S. 1873, pp. 411, 412), with the note, "Have only two specimens, the other being a ♂ not in full plumage, 16⅝ × 7½."

"Have still only one red-breasted Diving Duck. It may be *F. baeri*, Radde; but the bill is more even in width all along than *Fulix*."

"*Larus tridactylus* (?).

"Only one specimen, ♀, 16⅜ × 12¼, October, black-footed" (*Blakiston*).

I have not procured this bird on the coast of China.

126. Uria carbo (Pall.).

An immature bird of this sent. I have an adult from Kamtschatka, presented to me by Dr. V. Schrenk, of St. Petersburg. Blakiston writes, "One other specimen, darker."

Brachyrhamphus kittlitzi, Brandt.

The specimen now sent is a female, and like the one which I received before, and noted in my former list under "No. 68. Guillemot. *Uria*, sp." (p. 166). From the "Birds," by S. F. Baird, in the 'American Railway Survey Report' (p. 917), I make out the Hakodadi birds to belong to this species. They certainly are not *B. marmoratus*, which I have seen in Mr. Dresser's collection, and from the Woolwich Museum, procured at San Francisco, and shown me by Mr. Whitely. Blakiston writes with his last specimen, "I think, like the specimen I sent you before; ♂, $12 \times 5\frac{3}{4}$; and ♀, $10\frac{1}{4}$ to $11\frac{1}{4} \times 5\frac{1}{8}$ to $5\frac{1}{2}$; all in April and May."

XLI.—*Notes on Birds from Burma.* By Arthur, Viscount Walden, F.R.S.

In a supplementary number of the 'Journal' of the Asiatic Society of Bengal will be found a list of the birds of Burma, compiled by the late Mr. Blyth. Since it was written three gentlemen have very materially increased our knowledge of the species of birds which inhabit that part of Asia. Upper Pegu has been most zealously and successfully investigated by Mr. Oates; and the results of that gentleman's discoveries, and also those of Captain Feilden, have been made known by Mr. Hume (Str. Feath. iii. pp. 1–194) in a paper containing numerous most useful and interesting field-notes by those gentlemen. Large collections have been made at many points in the northern half of Tenasserim by Mr. Davison, a bare list of the birds obtained having been published by Mr. Hume (*op. cit.* ii. pp. 467–484). In the province of Tonghoo, and in the country of the Karens, Lieutenant Wardlaw Ramsay, after working the vicinity of Rangoon, has, for some time past, been vigorously collecting. Several new species have been discovered by him; and many species not known to possess so extended a range have, through his exertions, been added to the Burman avifauna. The researches of all the gentlemen I have named enabled me to considerably extend the list of Burman species as left by Mr. Blyth, and to raise the number of actually known species to about 660. Since the last sheet of this revised list was in the hands of the printers, another large collection, made in the Tonghoo and Karen hills by Lieutenant W. Ramsay, has reached me, containing some more species new to Burma. Upon these I desire to offer a few remarks.

In the Karen hills Lieutenant W. Ramsay had already discovered a number of Himalayan forms, such as *Batrachostomus hodgsoni*, two species of the genus *Niltava*, *Neornis assimilis*, a new species of *Actinura*, *Sibia picaoides*, *Cutia nipalensis*, a species of *Lioptila*, several species of *Liothrix* and affined genera, also of *Stachyrhis*, *Orthotomus coronatus*, two species of *Paradoxornis*, and *Saraglossa spiloptera*. He has also discovered the following species:—

MACROPYGIA LEPTOGRAMMICA (Temm.) = *M. tusalia* (Hodgson). One example was obtained on the Karen hills at 4000 feet elevation; another on the Tonghoo mountains at 3500 feet. These and Himalayan individuals (♂) are certainly not separable from the Javan (♂) form. With Javan female birds I have not been able to institute a comparison. Professor Schlegel seems, on the other hand, not to have had Himalayan females to compare with Javan (Mus. des P.-Bas, *Columbæ*, p. 108).

DUCULA GRISEICAPILLA, nobis, Ann. & M. N. H. (4) vol. xvi. p. 228 (Sept. 1, 1875), is a species distinct from, though nearly allied to, *D. insignis* and *D. badia*, discovered on the Karen hills at an elevation of from 4000 to 4200 feet. The distinctive character of the Tenasserim bird was mentioned by Mr. Blyth (J. A. S. B. xxviii. p. 416); but he does not appear to have ever named the species.

ARBOROPHILA BRUNNEIPECTUS (Blyth). Several examples of this Wood-Partridge have been recently obtained by Lieutenant W. Ramsay in the Karen hills at 4000 feet elevation. It has also been found by that gentleman and by Mr. Oates in the Tonghoo hills. An interesting note relating to it by the latter naturalist will be found in 'Stray Feathers' (iii. p. 174). In some examples the feathers on the upper part of the breast are crossed by two conspicuous narrow black bands, or by one broad one. In others the breast-plumage appears of a uniform tawny rufous; but when the feathers are pushed aside, many of them will be found to be broadly marked with dark brown.

GAMPSORHYNCHUS RUFULUS. Adult males of this species, obtained by Lieutenant W. Ramsay on the Tonghoo hills, in no respect differ from Darjeeling birds and others from the Garo hills &c. But some female examples he obtained in the Karen hills exhibit a mixture of brown and white feathers on the nape, suggesting apparently a state of transition from the young to the adult plumage. One of these has also a narrow rufous collar, which separates the white throat from the tawny breast-plumage. In another this collar is merely indicated at the sides of the neck, the white gular plumage being continuous with that of the breast, which is white. On examples in this state of plumage *G. torquatus*, Hume (Str. Feath. ii. p. 446), appears to have been founded.

PSARISOMUS DALHOUSIÆ. On two examples of this Broadbill, obtained by Mr. Oates near Thayet Myo, Mr. Hume has based a new title, *P. assimilis* (Str. Feath. iii. p. 53). The characters relied on are trifling differences of extent and of shade in the colour of some of the head- and neck-markings. Lieutenant W. Ramsay procured many examples of the bird in Tonghoo and the Karen hills. The greatest care has been taken by him in the preparation of the skins, which are excellent specimens of skilful taxidermy. Several of these examples are absolutely identical with others from Nipaul, Darjeeling, North Cachar, Assam, &c. The broad yellow band edged with silvery white is most conspicuous in a Karen individual. A Nipaul bird has the patch behind the eye of the same hue as another from the Karen hills. And in a bird from Asalu the white pearly band separates the whole of the golden-yellow throat from the green breast.

The markings and shades of colour vary considerably in this handsome Broad-bill. In some the broad yellow band on the sides of the neck is interrupted on the nape by a patch of blue; in others this patch of blue has a yellow patch above it. When the patch behind the eye is not pure yellow, but greenish or bluish yellow, the yellow plumes of the chin, and of the lores, and those which form the narrow frontal band, are generally more or less tinged with green. In the young bird the whole throat and the space before the eye is light green. The crown is dark green, uniform with the back, while those markings which eventually become golden, are sketched-in in pale yellow. No blue, excepting on the quills, and a tinge on the middle rectrices, is developed; nor is there a trace of silvery white. On the whole we may safely relegate *P. assimilis* to the limbo of unnecessary synonyms.

CALORNIS AFFINIS. Another title, *Calornis irwini*, Hume (Str. Feath. i. p. 481), falls within the same category of useless synonyms. Mr. Hume asks (*l. c.*), Was *C. affinis* described from Malacca? It was described (J. A. S. B. xv. p. 37) as a species distinct from the Malaccan *C. cantor* = *C. insidiator*, and was stated to inhabit Tipperah, Arakan, Tenassarim (?), and the Nicobars. Mr. Blyth, who did not admit the distinctness of the Nicobar *Calornis*, recently, with the Andaman entitled *C. tytleri*, Hume (*l. c.*), added that locality to those of Tipperah and Arakan. Tenasserim he noted with doubt, because Mr. Barbe had informed him that the Tenasserim species was the same as the Malaccan (*tom. cit.* p. 375, note). Notwithstanding, the Tipperah bird has again received a title from Mr. Hume.

ALCEDO BEAVANI.

Alcedo rufigastra, Walden, Ann. N. H. (4) xii. p. 487.

Alcedo beavani, Walden, *op. cit.* (4) xiv. p. 158.

A single example of this Kingfisher was obtained by Lieutenant W. Ramsay at Tonghoo. Probably it is the species catalogued by Mr. Blyth in his list under the title of *A. asia-*

tica; for there is no trustworthy evidence in favour of Javan *A. meningting*, Horsf.,=*A. asiatica*, Swains., occurring north of the Malaccan peninsula. Since Captain Beavan first obtained *A. beavani* in Maunbhoom, it has been found in the Andamans, in Tenasserim, in the Bhootan Doars, the Rajmahal hills, in Tipperah, in Cuttack, and in Siam.

On a former occasion (Ann. N. H. (4) x. p. 61) I ventured to assert that certain Javan birds reappeared in Burma, some penetrating so far as Nipaul, although they were not known to inhabit Malacca or Sumatra. The want of an authentic record of all the Malaccan and Sumatran birds prevents me from advancing this assertion as a demonstrated fact. Nor am I able to state at what part or parts of the Malaccan peninsula these Javan forms severally reappear. But in order that the assertion may be tested by others more familiar with Indian and Indo-Malayan birds, the subjoined lists have been prepared of the principal Javan genera and Javan species which, while occurring in Burma, and in some instances in regions to the west or east of that country, are not known to me as inhabitants of either Malacca or Sumatra.

Even should these lists stand the test of a rigid scrutiny, they are not offered as part of the basis of any zoo-geographical theory, but are merely intended as a small contribution to our knowledge of distribution. The presence or absence of certain Sumatran or Malaccan birds in Burma present equally perplexing phenomena; while, again, some Javan species are common to Java, Malacca, and Burma.

List of Javan genera not known to occur in Malacca and Sumatra, but found in Burma:—

Brachypteryx.
Analcipus.
Cochoa.
Myiophonus.
Bhringa.
Dendrophila.
Sturnopastor.
Crypsirhina.
Pavo.

To these may perhaps be added

Zoothera.
Pterythrius.
Allotrius.

List of Javan species not known to occur in Malacca or in Sumatra, but found in Burma :—

Butastur liventer. *Harpactes orescius.*
Dendrotypes analis. *Crypsirhina varians.*
Henicurus leschenaulti (*fide* Hume).
Dendrophila frontalis.
Timelia bengalensis (representative form).
Megalurus palustris. *Bhringa remifer.*
Hyloterpe grisola.
Buchanga intermedia (representative form).
Buchanga atra (representative form).
Macropygia leptogrammica. *Pavo muticus.*

Besides the many Himalayan forms already noted, which Lieutenant W. Ramsay had enabled me to add to the list of Burman birds, are several which have hitherto been ranked as peculiarly belonging to China or else Siam. Such, for instance, are *Gecinus erythropygius*, *Æthopyga dabrii*, *Pycnonotus atricapillus*, *Acridotheres siamensis*, and *Parus commixtus*.

The word Burma cannot, however, in any sense be used to express a well-defined zoological province or subprovince. In Mr. Blyth's list it is employed for all those regions which formerly constituted the Burman empire, three of which, within the last fifty years, have been ceded to Great Britain (namely, Arakan, Tenasserim, and Pegu). It is bordered by countries possessing ornithological features more or less peculiar; and where the Burman territory comes in contact with any one of these countries, it is, as might be supposed, more or less peopled by their characteristic forms. But the presence of peculiar Javan forms, unknown in Malacca or Sumatra, if it be a fact, is a marked characteristic, which cannot be accounted for by contact of present boundaries.

XLII.—*Remarks on the Species of the Tanagrine Genus* Chlorochrysa. By P. L. Sclater, M.A., Ph.D., F.R.S.

(Plate X.)

The beautiful Tanagers of the genus *Chlorochrysa* are associated with some of my earliest ornithological experiences. In the latter part of the year 1850, Mr. Edward Wilson, who was at that time purchasing birds in large numbers for presentation by his brother, Mr. Thomas B. Wilson, to the Museum of the Academy of Natural Sciences of Philadelphia, placed in my hands examples of two species of this form. One of these I quickly recognized as the *Callospiza calliparia* of Tschudi; the other I was preparing to describe as new, when I found that I had been just anticipated by Prince Bonaparte, who had characterized it shortly in the 'Comptes Rendus' as *Calliste phœnicotis,* and had at the same time named the other species *Calliste bourcieri.* When Prince Bonaparte discovered that he had committed an error in passing over Tschudi's description of the former of these two species, he endeavoured, with characteristic ingenuity, to preserve the use of his own specific term by proposing to convert Tschudi's previously given name, "*calliparæa,*" into a genus. This, however, as I pointed out in 1851*, could not be permitted, as he had already invented and published the generic name *Chlorochrysa* for the same two birds. This generic name I adopted in an article published in the 'Contributions to Ornithology' for 1851, and gave full particulars of what was then known of the two species of the genus, accompanied by accurate figures of both species from Mrs. Hugh Strickland's accomplished pencil.

Little more has been added to our knowledge of these two interesting birds since that period. A few skins of them have been received, chiefly from collectors in Ecuador. The only addition made to the ranks of the genus has been the single species discovered in the U. S. of Columbia by Mr. Salmon, which I described last year as *C. nitidissima.*

---

* Contr. Orn. 1851, p. 93.

The three species may be diagnosed as follows:—

a. gula nigra: ventre viridi, medialiter cærulescente....	1. *calliparia.*
b. gula viridi: ventre concolori........................	2. *phœnicotis.*
c. gula flava: ventre cærulescente, medialiter nigro	3. *nitidissima.*

1. CHLOROCHRYSA CALLIPARIA.

Callospiza calliparæa, Tsch. in Wiegm. Arch. 1844, p. 202, et Faun. Per. p. 202.

Calliste calliparæa, Bp. Consp. p. 235.

Calliste bourcieri, Bp. Compt. Rend. xxxii. p. 76.

Calliparæa bourcieri, Bp. Rev. Zool. 1851, p. 129, et Note s. l. Tang. p. 3.

Chlorochrysa calliparæa, Sclater, Contr. Orn. 1851, p. 99, pl. 73. fig. 1; P. Z. S. 1855, p. 158, 1856, p. 266, 1858, p. 74; Syn. Av. Tanagr. p. 92; et Cat. A. B. p. 61; Scl. et Salv. Nomencl. Av. Am. p. 18; Tacz. P. Z. S. 1874, p. 515.

Aglaia chapoul, Parz. MS.

Nitidè viridis: regione oculari, dorso inferiore et ventre medio cærulescente tinctis: gulâ nigrâ, plagâ castaneâ utrinque marginatâ: maculâ verticali et uropygio lætè croceis: rostro et pedibus nigris; long. tota 4·6, alæ 2·8, caudæ 2·0. *Jr.* subtùs fuscescenti-viridis, gulâ nigrâ carens.

Hab. Columbia int.; Æquatoria et Peruvia.

I have never seen Peruvian skins of this species; but so far as can be told from Tschudi's description, they do not differ from those of Ecuador and Columbia. Tschudi gives the wood-region of North and Middle Peru as its habitat; but I suppose he met with it in the district of Junin, east of Lima, where most of his birds were obtained, and where Jelski also collected specimens at Amable Maria and Pumamarca.

In Ecuador *C. calliparia* seems to occur in the wooded valleys on both sides of the great range. Bourcier obtained specimens in the valley of Baños, near Tungaragua, one of which is now in my collection; and a single skin of an immature bird was in Verreaux's large series from the Rio Napo, which I catalogued in 1858.

As regards Columbia, this Tanager is found, though not very frequently, in "Bogota" collections. The first examples of it which I ever saw were brought to Paris in 1850 by a M.

Chapoul, and labelled "*Aglaia chapoul*" by the late well-known bird-dealer, Parzudaki. One of these is still in my possession. I have also a single immature specimen of the regular "Bogota" make, purchased of a London dealer in 1853.

An accurate figure of the species is given in the 'Contributions to Ornithology' for 1851, above referred to.

2. CHLOROCHRYSA PHŒNICOTIS.

Calliste phœnicotis, Bp. Compt. Rend. xxxii. p. 76 (1851).

Calliparæa phœnicotis, Bp. Rev. Zool. 1851, p. 129, et Note s. l. Tang. p. 3.

Chlorochrysa phœnicotis, Sclater, Contr. Orn. 1851, p. 100, pl. 72. fig. 2; P. Z. S. 1856, p. 266, 1860, p. 87; Syn. Av. Tanagr. p. 93; et Cat. A. B. p. 61; Scl. et Salv. Nomencl. Av. Am. p. 18.

Nitidè viridis: tectricibus alarum minoribus et maculis utrinque unâ sub oculo alterâ auriculari nitenti-brunneo-olivaceis: hâc maculâ auriculari plagâ corallino-rubrâ versus nucham marginatâ: alis caudâque intus cum rostro et pedibus nigris: long. tota 5·0, alæ 3·0, caudæ 1·7.

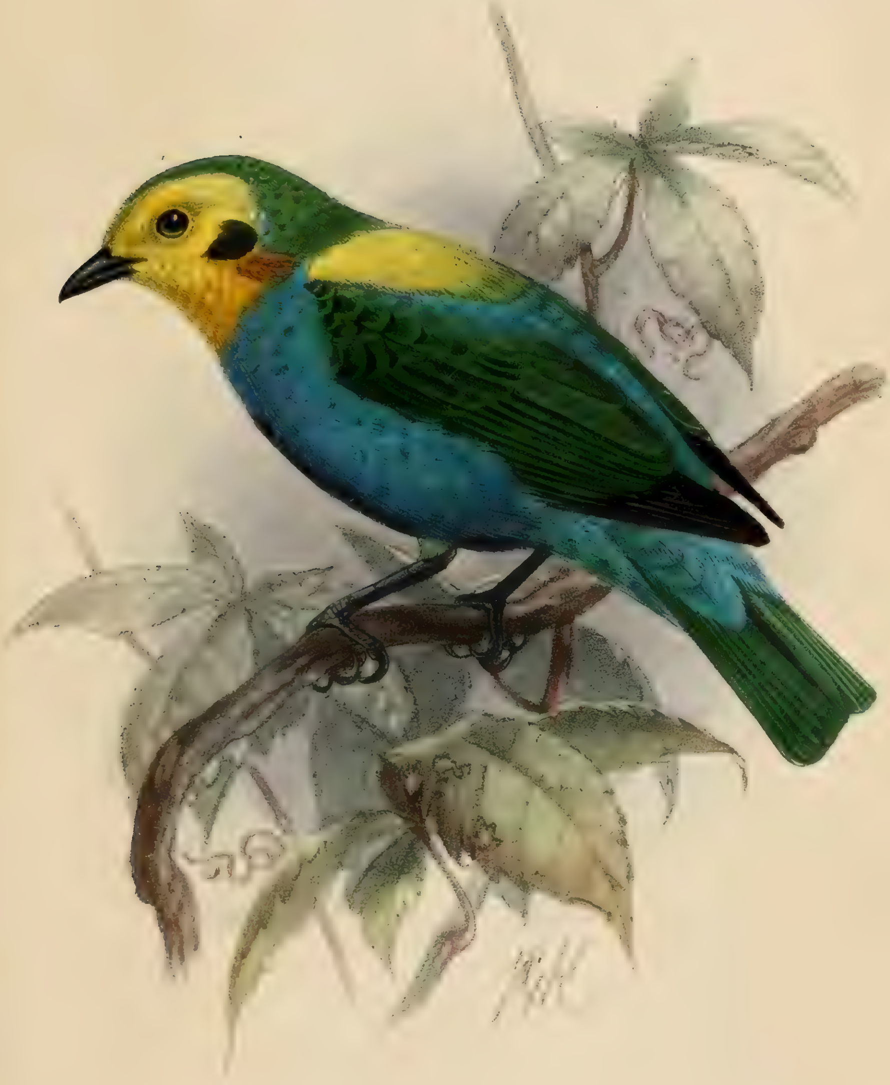
Hab. Æquatoria transandeana.

So far as I know, this Tanager is restricted to Transandean Ecuador, where it was first obtained by M. Bourcier during his consulship at Quito. M. Bourcier's skins were collected near Nanegal, a village situated ten leagues from Quito, on the slopes of Pichincha, at an elevation of about 4000 feet above the sea-level. Mr. Fraser visited the same spot in February 1859, and obtained a single skin of this species, which, as also one of M. Bourcier's specimens, is now in my collection. I have never seen the species from any other locality. Mr. Fraser notes the irides as "hazel."

3. CHLOROCHRYSA NITIDISSIMA. (Plate X.)

Chlorochrysa nitidissima, Sclater, P. Z. S. 1873, p. 728.

Suprà nitidè viridis, tergo cærulescente; pileo antico, capitis lateribus et interscapulio flavis: maculâ auriculari utrinque nigrâ: alis caudâque nigris viridi limbatis: uropygii plumis paucis aurantiaco terminatis: subtùs cærulescenti-



J.G.Keulemans lith

M&N.Hanhart imp

CHLOROCHRYSA NITIDISSIMA.

AMERICAN MUSEUM
CENTRAL PARK,
NEW YORK.
OF NATURAL HISTORY.

viridis, ventre medio nigro, gutture toto aureo-flavo, hôc colore in collo in aurantiacum transeunte : rostro et pedibus nigris : long. tota 5, alæ 2·7, caudæ 1·75.

Hab. Status Antioquiæ, reipubl. Columbianæ.

M. Salmon's single specimen, now in my collection, is the only example yet received of this beautiful species. The figure represents it of the natural size.

XLIII.—*Note on* Chalcopelia brehmeri. By. Dr. O. Finsch.

I have received from Count Hercules Turati, of Milan, a Dove from the Ogone, a confluent of the Gaboon, labelled "*Chalcopelia puella*, Schleg.," but which, after an examination with the true *C. puella* from Fantee, proves to belong not to that species, but to *C. brehmeri*, described by Dr. Hartlaub from a single specimen in the Bremen Museum, sent by Mr. Henry Brehmer from Gaboon. It is worthy of remark that the original description of *C. brehmeri* (Ibis, 1865, p. 236) relates to the young, not full-coloured bird, and that the distinguishing characters, "nearly allied to *C. puella*, but differing in the reddish colour of the forehead and the rectrices; it is also smaller than *C. puella*," are also referable only to the young bird, and of no specific value.

The adult *C. brehmeri*, indeed, corresponds in every respect with the adult *C. puella*; only the blue of the head and hind neck is a little darker and more vivid, but it may be distinguished by the metallic spots on the last secondaries, the so-called tertials. These are in *C. puella* dark metallic green, whereas they are in *C. brehmeri* splendid metallic coppery red, with golden greenish reflections. These spots are also indicated in the young bird, and are of the same coppery shine as in the old bird; but this significant character, the only one which may be considered of specific value, as far as our knowledge reaches at present, is not mentioned in the description in 'The Ibis.'

The smaller size of the type specimen is also due to the bird not being full-grown; the old bird is as large as, perhaps a little larger, than *C. puella*.

	Alæ.		Caud.		Rostr.	Tars.
	in.	lin.	in.	lin.	lin.	lin.
C. brehmeri jun., type	4	7	3	6	7	11
„ ad. ♂	5	0	3	10	7½	12
C. puella ad.	4	9	3	10	7⅓	11

XLIV.—*Notes on a 'Catalogue of the* Accipitres *in the British Museum,' by* R. Bowdler Sharpe (1874). By J. H. Gurney.

[Continued from page 370.]

In continuing my observations on the genus *Accipiter*, I think it desirable to call attention to the fact that several of the Hawks included by Mr. Sharpe in that genus bear a remarkable resemblance in their coloration and markings, both in their immature and adult plumage, to various other species which are included by Mr. Sharpe in the genus *Astur*, and that these resemblances are strongest between species inhabiting the same regions. Thus

Accipiter	*ovampensis*	resembles	*Astur*	*polyzonoides.*
„	*minullus*	„	„	*tachiro.*
„	*virgatus*	„	„	*trivirgatus.*
„	*erythrauchen*	„	„	*griseigularis.*
„	*cirrhocephalus*	„	„	*approximans**.

It was probably the existence of such similarities that induced the late Dr. Kaup to make the following remark (P. Z. S. 1867, p. 170):—"The length of the middle toe, or of the toes generally, has only a specific value in the *Nisi*, and not a generic one,"—an observation which appears to me to have considerable force, though I will not now occupy further space by here discussing it.

As in the case of the Hawks referred by Mr. Sharpe to the genus *Astur*, so, in like manner, among those comprised by him under the generic name of *Accipiter*, some distinct natural groups appear to me to exist; and I now purpose to enumerate the species of which these groups are, according to my view, severally composed, considering first those that are to a certain extent aberrant from *A. nisus,* which may be taken as the type of Mr. Sharpe's genus *Accipiter,* and commencing with the powerful American Hawks, for which the late Prince Bonaparte proposed the subgeneric name of *Cooperastur.*

---

* According to Prof. Schlegel (Museum des Pays-Bas, A. *Accipitres*, p. 62), a similar resemblance exists between the adults of *Accipiter madagascariensis* (*A. lantzii*, Verr.) and *Astur hensti*.

An excellent summary of this group has been given by Messrs. Sclater and Salvin at p. 170 of 'Exotic Ornithology,' from which I extract the following list of the species that are comprised in it:—

"Section A. Species uniformly coloured beneath.

1. *A. pileatus.*
2. *A. bicolor.*

Section B. Species more or less mottled beneath.

3. *A. cooperi.*
4. *A. gundlachi.*
5. *A. guttatus.*
6. *A. chilensis.*

Section C. Species broadly barred below and with breast rufous.

7. *A. pectoralis.*"

In the summary above referred to, the authors of the 'Exotic Ornithology' treat *A. mexicanus,* Swains., as a synonym of *A. cooperi*; and in this view, which appears to me to be entirely correct, Mr. Sharpe concurs; a similar conclusion has also been arrived at by Mr. Ridgway, who has published some remarks on this subject at p. 84 of the last volume of the 'Proceedings' of the Academy of Natural Sciences of Philadelphia, where he has also given some interesting particulars of the climatic variations of colouring which he has observed in specimens of *A. cooperi* obtained in various parts of the North-American continent.

In the same paper Mr. Ridgway confirms the view taken by Messrs. Sclater and Salvin in treating *A. gundlachi* as specifically distinct, a point as to which Mr. Sharpe has expressed some doubt in a footnote to p. 137 of his Catalogue.

Like Mr. Sharpe, I have never had an opportunity of personally examining this Cuban Hawk; and I am not aware that any specimen of it exists in this country.

With reference to *A. mexicanus,* I find that the view held by the naturalists above referred to, as to its identity with *A. cooperi,* is also taken by Dr. Coues in his recent work on the birds of North-western America; the same author, at p. 335 of that work, makes the following remarks in treating of the differences between *A. fuscus* and *A. cooperi*:—"There is also a difference in the feet, those of *fuscus* being much slenderer, comparatively as well as absolutely, and relatively longer." This tendency to an Asturine form of foot in *A. cooperi* is more or less characteristic of the whole subgenus *Cooperastur.*

Another American form, that very rare species* *A. collaris,* is yet more remarkable in the robust character of its tarsi and feet, and is perhaps not properly referable to any other of the subgeneric forms into which the genus *Accipiter,* as used by Mr. Sharpe, may be considered to be divisible, being, in fact, very much *sui generis.*

With regard to this species I have also to observe that the description of it given by Mr. Sharpe, though headed "immature," is apparently taken from the adult typical specimen in the British Museum, which was figured and described at p. 148 of 'The Ibis' for 1860, pl. vi.

A younger specimen, in the Norwich Museum, was also briefly pescribed in the same notice, and a representation of the upper portion of it introduced into the accompanying plate. Referring my readers to this description, which will be found at p. 149 of the volume above mentioned, I may add that, although the chief part of the plumage of this specimen is immature, it is acquiring the adult dress by a moult on the back and wings, thus showing the striking difference between the brownish black hue which characterizes its upper surface when adult, and the rich rufous tint which is conspicuous on that part of its plumage when immature, and especially so on the wings and tail, though both the rectrices, and also the quill-feathers of the wing, are transversely barred with black; in the wing-feathers, however, the dark bars appear only on the inner web, except in the case of the tertiaries, where they extend slightly across and beyond the shaft; the interspaces between the bars on the wing-feathers are throughout of a paler rufous than the outer webs; the primary and secondary quills are also tipped with blackish brown. A much more abundant tropical American species, *Accipiter tinus,* exhibits in its first plumage a rufous phase much resembling the immature dress of *A. collaris*; such an example is described by Mr. Sharpe as "young," the second, or succeeding stage being defined by him as "immature," and the final state as "adult."

---

* *Conf.* Ibis, 1874, p. 321.

A young male from the Upper Amazons, which is preserved in the Norwich Museum, agrees generally with Mr. Sharpe's description of the "young" bird, but differs from it in the following particulars: the upper scapulars and interscapulary feathers are crossed by alternate transverse bars of a very dark rufous and of a rufous of a brighter hue; and on the lower scapulars these tints are further varied by three or four bands of fulvous white crossing the entire breadth of each feather near its base, but nearer to its point only the inner web.

Notwithstanding the great resemblance in the character of coloration which exists between *A. collaris* and *A. tinus* in their first dress, and, to a certain extent, in their adult plumage also, I am disposed to assign *A. tinus* to a group distinct from *A. collaris*; and in this group I would also include three small African Hawks, *A. hartlaubi, A. minullus,* and *A. erythropus,* if indeed the latter, which I have not had an opportunity of examining, be really a distinct species from *A. minullus.*

The late Dr. Kaup associated *A. tinus* and *A. minullus* in a distinct subgenus, first under the title *Hieraspiza,* with *A. virgatus,* and subsequently under that of *Teraspiza,* with *A. virgatus* and *A. rhodogaster*; but I am disposed to consider that the two latter species belong rather to the group of which *A. nisus* is the type, though they are in some respects aberrant members of it, and though *A. rhodogaster* is remarkable for a rufescent immature plumage, which, in its upper parts, much resembles that of *A. tinus* at a corresponding age.

A. hartlaubi, A. minullus, and *A. erythropus* all bear in their adult stage conspicuous white spots on the inner web of the middle rectrices; and a similar white spot appears on the upper part of the tail of a male specimen of *A. tinus,* from Demerara, in the Norwich Museum. This specimen is in the second stage of plumage; and both it and a female in the same collection are passing by a moult from that plumage to the adult dress.

As I am not aware that the colour of the iris in *A. tinus* has been recorded, I may mention that an adult male from the Ucayali, in the Norwich Museum, has been thus ticketed by its collector :—"Iris brown, skin round the eye yellow."

The second plumage of *A. tinus* much resembles the immature dress of *A. hartlaubi*; and as the latter is not described by Mr. Sharpe in that stage, I may add the following particulars of a young male from Casamanze, which is preserved in the Norwich Museum :—The general colour of the upper surface is dark brown, inclining to blackish on the crown of the head, the feathers at the back of the head and neck showing conspicuous white bases; immediately above the shoulders a decided tinge of rufous, which also appears on the edging of the feathers forming the outer wing-coverts, and especially of those near the carpal joint; all the quill-feathers of the wing crossed with alternate bands of darker and paler brown on the inner webs, but not extending to the innermost margin of these webs, which is of a pale buff colour; the outer webs of the primaries somewhat paler than the adjacent portion of the inner webs; the upper tail-coverts white, with three cross bars of dark brown on each feather; the outer webs of the rectrices with dark transverse bars alternating with paler bars, which latter are on the inner webs more or less entirely white; the dark bars are eight in number on the outer rectrices, and six on the remainder; on the under surface of the tail the entire interspaces between the dark transverse bars are white, slightly tinged with buff; the throat is creamy white interspersed with small spots and shaft-marks of dark brown; the entire remainder of the under surface of the body, including the thighs, is white, with transverse bars of pale rufescent brown, which become broader and more rufous on the flanks and on the outer side of the thighs, but on the under tail-coverts are narrow, sparse, and irregular.

Mr. Sharpe does not describe the female of this species, and I am unable to supply the deficiency; but Dr. Hartlaub, at p. 16 of his work on the birds of West Africa, remarks respecting it, "The female does not essentially differ in colour [from the male], but is a third larger."

With regard to *A. minullus*, it may be worth observing that in two of the specimens preserved in the Norwich Museum, an adult male and female approaching the period of moulting, the white spots on the central rectrices have evidently become much more abraded by the action of the weather than the dark portions of the same feather; and I may add that I have frequently observed the same phenomenon in the case of the pale spots on the tail of *Falco saker*.

Another specimen of *A. minullus*, in the same collection, an immature female, is commencing, by a moult, the assumption of the adult dress upon the breast, which I note as indicative of the mode in which the change is effected in this species.

Following my purpose of referring in the first instance to the more aberrant species of the genus *Accipiter*, I may now mention a remarkable African form, *A. melanoleucus*, which, though it has the elongated middle toe of a Sparrow-Hawk, nearly approaches in size to the typical Goshawks, being not much smaller than *Astur palumbarius*.

The coloration of this species, especially when adult, is very peculiar, and seems to point it out as naturally separated from all other Hawks.

It is found in three very distinct phases of plumage, which are severally designated by Mr. Sharpe as "young," "mature," and "adult," and each of which is common to both sexes.

The measurements supplied by Mr. Sharpe under the head of "mature," give the ordinary dimensions of the male bird; and those under the head of "adult," those of the female.

The first plumage, described by Mr. Sharpe as "young," is always (so far as I have observed) more rufescent than is represented in the figure of the young bird given in Sir A. Smith's 'Illustrations of South African Zoology' (Aves, pl. 18); but two young males in the Norwich Museum, one of which contains a considerable remnant of nestling-down, are of a much richer rufous than two young females in the same collection.

The second plumage assumed by this species is that which Mr. Sharpe designates as "mature." The Norwich Museum contains six specimens in this dress, three of which retain partial traces of the rufescent stage which immediately preceded it.

The third phase of plumage, which is almost entirely black, is spoken of by Mr. Sharpe as "adult;" but if this expression is intended to imply that every adult specimen ultimately acquires it, I would suggest that such an inference is hardly compatible with the rarity of these melanistic individuals; and, as an instance of their comparative scarcity, I would mention that out of seven adult specimens preserved in the Norwich Museum, only one is in this peculiar dress; this example, a male, has all the underparts of a glossy black (with a slight greenish reflexion in some lights), except the under tail-coverts, which are transversely marked with broad alternate bars of black and white, and excepting also the chin and uppermost portion of the throat, which are white mingled with black, the feathers there being white with narrow black bases, shafts, and tips. In other respects this specimen agrees with Mr. Sharpe's description, save that it shows no traces of "buffy white" at the base of the quills.

I may add, as a parallel case, that Mr. Layard, in his work on the birds of South Africa, records a male of this species which was "throughout of a rich brown-black," as having "the chin and vent white, with streaks and blotches of the prevailing colour."

There remains but one other section of the Sparrow-Hawks included by Mr. Sharpe in the genus *Accipiter* which appears to me to be distinctly separable from the central group, of which *A. nisus* is the type, namely that which is composed of those species which assimilate in the character of their markings and coloration to the Asturine subgenus *Urospizias*. These are three in number, viz. *A. cirrhocephalus, A. rubricollis,* and *A. erythrauchen,* respecting which I have only to remark:—with reference to *A. cirrhocephalus,* that Tasmania should be added to the localities given for it by Mr. Sharpe; and with regard to *A. erythrauchen* (the immature stage of which is not described by Mr. Sharpe), that a young specimen from Gilolo, in the Norwich Museum, closely resembles in its plumage an immature specimen of its nearly allied congener, *A. rubricollis,* from Ceram, in the same collection.

I may add that Mr. Sharpe does not include Ceram amongst the localities of *A. rubricollis,* but it is given by Mr. Wallace in 'The Ibis' for 1868, p. 7.

Proceeding to the consideration of the most typical section of Sparrow-Hawks, the group of which *A. nisus* may be considered the central species, I think it will be convenient to refer, in the first place, to the four species of this group which inhabit the American continent, viz. *A. fuscus*, *A. chionogaster*, *A. erythrocnemis,* and *A. ventralis.*

With regard to *A. fuscus,* I may note that the Norwich Museum possesses an adult female from New Jersey, in which the rufous tints of the underparts are as bright and very nearly as dark as those of a male bird in normal adult plumage; also that an adult male from the southern slope of the volcano of Chiriqui has all the underparts of a much darker rufous, and the white interspaces much narrower and less conspicuous, both on the sides of the breast and on the thighs, than is the case in any other specimen which I have examined.

The slate-colour of the upper parts is also very unusually dark in this individual, especially on the upper surface of the head, which is almost black.

This curious specimen forms part of the fine collection of Messrs. Salvin and Godman, to whose kindness I am indebted for the opportunity of examining both it and also many other rare and interesting American Accipitres.

The next species to which I propose to allude is *A. chionogaster,* with reference to which I may observe that the measurements given by Mr. Sharpe of that species appear to be those of the male bird, and I therefore add the following taken from a Guatemalan female in the collection of Messrs. Salvin and Godman:—wing from carpal joint 8·6 inches, tarsus 2·2, middle toe s. u. 1·6.

Mr. Sharpe only describes the adult plumage of this species, which is the same in both sexes; and I may therefore mention that a young male from Merida, in Venezuela, in the above collection, differs from Guatemalan* adults in the following particulars, viz.:—All the feathers on the upper surface, except the primaries and rectrices, are narrowly tipped with rufous brown, and those on the sides of the neck are edged throughout with the same; the dark cross bars on the tail are six in number on the upper, and nine on the lower surface; the shaft-marks on the breast and abdomen are broader than in the adult, and there are two irregular cross bars on each feather on the sides of the breast; the thighs are of a uniform rich rufous, much darker than the fulvous tint of the tibial feathers in a somewhat more advanced, but still immature, male and female from Guatemala, in which the thighs are nearly as pale as in the Guatemalan adults of both sexes.

I have examined two young males of this species in which the iris has been noted by the collector as being yellow; and I think it well to note the fact, as the colour of the eye in this species has not, so far as I know, been recorded.

Passing on to the next nearly allied, but more southern species, *A. erythrocnemis,* I may remark that the type specimen in the British Museum, which is the only one of which Mr. Sharpe gives the measurements, appears by its dimensions to be a male; and I therefore annex, as a guide to the comparative size of the sexes, which do not otherwise differ, the following measurements of two presumed males and three presumed females:—

---

* I have not had any opportunity of examining an adult specimen from Venezuela.

	Wing from carpal joint. in.	Tarsus. in.	Middle toe, s. u. in.
Male, taken from Sclater and Salvin's 'Exotic Ornithology'	6·6	1·9	
Male, in Norwich Museum, from Bahia	6·4	1·7	1·1
Female, in Norwich Museum, locality unknown	8	2	1·4
Female, in Messrs. Salvin and Godman's collection, from East Brazil	7·6	1·8	1·4
Female, in the same collection, from Bahia	7·6	1·9	1·3

It would appear from the above that the average size of *A. erythrocnemis* is somewhat less than than that of its western congener, *A. ventralis,* of which species I have recently measured eight presumed males and the same number of presumed females, with the following results :—

	Wing from carpal joint. inches.	Tarsus. inches.	Middle toe, s. u. inches.
Males..............	6·7 to 6·9	1·9 to 2	1·15 to 1·3
Females	7·9 to 8·7	2·1 to 2·2	1·25 to 1·5

The excess in average size of *A. ventralis* over *A. erythrocnemis,* though not very great, is yet of importance as a guide in distinguishing the two species, and the more so, as specimens of *A. ventralis* occur which are almost precisely similar in the coloration and markings of their under surface to the adults of *A. erythrocnemis,* the breast and abdomen being barred with alternate transverse bands of white and greyish brown, though the upper surface is always rather darker than in the adults of *A. erythrocnemis.*

I think it is certain, from a comparison of a series of specimens, that this plumage of *A. ventralis* intervenes between the earliest dress, which Mr. Sharpe designates as "young," and that which he correctly describes as "adult." Three such females from New Granada are preserved in the Norwich Museum; and a male, passing out of this intermediate stage into the adult plumage, and also from New Granada, is in the collection of Messrs. Salvin and Godman: in this specimen the change appears to be taking place by an alteration in the colour of the feathers, and not by a moult.

I may add that I have seen a very nearly adult male of this species in which the iris was recorded by the collector as being yellow, as in the younger specimen described by Mr. Sharpe.

Mr. Sharpe includes *A. nigroplumbeus* of Lawrence, from Ecuador, among the synonyms of *A. ventralis*; but if it be identical with that species, as it possibly may be, the type specimen is one which differs in the plumbeous aspect of its under surface from any example of *A. ventralis* which I have examined. This specimen is described by Mr. Lawrence as having the "chin and upper part of the throat of a dull ashy plumbeous; abdomen dark brownish cinnamon; thighs and under tail-coverts plumbeous, like the breast, but with an intermixture of dull cinnamon" (*vide* Ann. Lyc. N. Y. 1869, p. 270).

An adult male of *A. ventralis* from Ecuador, in Messrs. Salvin and Godman's collection, has the rufous colouring of the underparts remarkably dark and rich, but without any admixture of the plumbeous tinge which distinguishes Mr. Lawrence's specimen above referred to.

Of the Sparrow-Hawks peculiar to the African continent, I consider that only two belong to the most typical group, viz. *A. ovampensis*, which I have already described (*anteà*, p. 367), and *A. rufiventris*, with reference to which I may mention a curious resemblance that it bears in one respect to *A. ovampensis*, viz. in having three yellowish white spots on the shafts of the rectrices between the dark transverse bars on the upper surface of the tail. In *A. rufiventris* these white spots are limited to the shafts of the feathers, and do not, as in *A. ovampensis*, extend to the adjacent webs.

As Mr. Sharpe does not describe the immature plumage of *A. rufiventris*, I may point out that the young male is correctly figured in Temminck's 'Planches Col.' pl. 496 (though the lettering at the foot of the plate inaccurately describes the specimen as "mâle adulte"), and also in Smith's 'Illustrations of the Zoology of South Africa' (Aves, pl. 93, fig. B); but I must add that one of the young males in the Norwich Museum shows traces of transverse bars on the upper breast, which may be the remnants of a still earlier stage, resembling the plumage of the immature female.

A young female is represented in figure C of Sir A. Smith's plate; and an immature hen bird in the Norwich Museum agrees well with this representation in markings, but not altogether in colour, being browner on the upper surface, and exhibiting a decidedly rufous coloration on the dark markings of all the lower parts, except the undersurface of the rectrices.

Accipiter nisus is the only typical Sparrow-Hawk found in Europe, whence its range extends eastward to Japan, westward to Madeira, and southward to Northern Africa.

The variations of plumage which mark the different ages of both sexes of this species have been very fully described by Messrs. Sharpe and Dresser in their article on this Hawk in the 'Birds of Europe,' since which, a male, supposed to be of this species, but in abnormal and, so far as I know, unique plumage, which "was shot on Tyneside in 1854," has been described and figured by Mr. Hancock at page 16 of his valuable 'Catalogue of the Birds of Northumberland and Durham.' In this individual the coloration and absence of markings on the underparts, from the chin to the vent, appear closely to resemble the adult plumage of *A. rufiventris*; but in the further peculiarity of having "no distinct bands on the tail" the Tyneside specimen differs both from *A. rufiventris* and from ordinary examples of *A. nisus*.

Mr. Sharpe is not yet satisfied of the specific distinctness of *Accipiter melaschistos* of Hume from the ordinary *A. nisus*; and I have but very little additional information to offer tending to elucidate this question; but I have had, through the kindness of Lord Walden, the opportunity of measuring a female of *A. melaschistos* from Simla, with the following results—wing from carpal joint 10·5 inches, tarsus 2·75, middle toe s. u. 1·75. These dimensions are slightly in excess of those of the largest female which I have examined of *A. nisus*, a specimen from Foochow, in the Norwich Museum, of which the corresponding measurements are—wing 10·2 inches, tarsus 2·5, middle toe s. u. 1·7.

The Turkestan Sparrow-Hawk, lately described by Severtzoff under the title of *A. cenchroides* (*vide anteà*, p. 104), is probably referable to the same group as *A. nisus*; but it is possible that it may prove identical with Mr. Blanford's Baluchistan Hawk, to which I have alluded at a previous page (*vide anteà*, p. 361)*.

I have already expressed my opinion that *Accipiter virgatus* belongs to the most typical section of the Sparrow-Hawks; and I will now proceed to the consideration of that species, with reference to which I may, in the first place, observe that the streak of white over the eye, mentioned in Mr. Sharpe's description of the immature bird, is by no means a constant character, being absent in many specimens. Judging from a remark at page 152 of his catalogue, Mr. Sharpe does not appear to have met with the male of this species in its second or intermediate dress; but I have seen several males in that stage. They are then chiefly characterized by the sides of the breast being of a greyish brown very slightly tinged with rufous, instead of a bright rufous, as in the males that are fully adult.

In the adult plumage of this species the rufous colouring of the lower part of the breast, the abdomen, and the thighs is always (so far as I have observed) transversely barred with white; and although the rufous of the thighs is in some specimens paler than that of the adjacent parts (as described by Mr. Sharpe), it is in others fully as rich and bright as the rufous of the abdomen; I have, however, never seen a female in which the rufous tints were so bright as in the adult males.

This species varies considerably in size, as will be seen by the following measurements, chiefly taken from specimens in the Norwich Museum:—

	Wing from carpal joint. in.	Tarsus. in.	Middle toe, s. u. in.
Presumed males:			
From India (exact locality unknown)	6·2	1·9	1·2
Ditto, ditto	6·15	1·8	1·25

---

* [Mr. Dresser tells us that Dr. Severtzoff now considers this bird to be only a large form of *A. badius*.—Ed.]

	Wing from carpal joint. in.	Tarsus. in.	Middle toe, s. u. in.
From Nepal	6·7	2·1	1·2
From Himalayas	6·2	2·05	1·05
Ditto	6·5	2·05	1·2
Ditto	7·3	2	1·2
From Ceylon	6·35	1·8	1·15
From Malacca	6·7	1·9	1·25
Ascertained males:			
From Batavia	5·9	1·9	1·15
Ditto	5·8	1·7	1·15
Presumed females:			
From India (exact locality unknown)	7·7	2·1	1·45
Ditto, (ditto)	7·7	2·2	1·5
From Scinde	8·2	2·1	1·5
From Himalayas	7·8	2·2	1·45
From Singapore (two specimens)	7·3	2·1	1·4
From Borneo	imperfect.	2·1	1·5
Ascertained female:			
From Batavia	7·2	2	1·5

These measurements apparently lead to the inference that northern specimens are, on the average, larger than those from more southern localities; and this excess in size is still more apparent in the race inhabiting Japan and Formosa, which has been separated under the title of *A. gularis*, but which Mr. Sharpe consolidates with *A. virgatus*.

The following are measurements of specimens of *A. gularis* in the Norwich Museum:—

	Wing from carpal joint. in.	Tarsus. in.	Middle toe, s. u. in.
Presumed males:			
From Japan	7·8	2·05	1·3
From Formosa	7	2·1	1·2
Ditto	6·9	2·1	1·2
Ditto	6·7	2·05	1·2
Presumed females:			
From Japan	8·8	2·2	1·4
From Formosa	8·5	2·5	1·7

Professor Schlegel, in his supplementary catalogue of the birds of prey in the Leyden Museum, published in 1873, unites *A. gularis* with *A. virgatus*; but in his earlier catalogue of 1862 he separates them, and writes thus with reference to *A. gularis*:—"Voisin du *Nisus virgatus*, mais d'une taille plus forte, à doigts un peu plus courts, à la quatrième rémige dépassant notablement la cinquième."

With reference to this last remark Mr. Hume writes thus in 'Stray Feathers,' vol. ii. p. 141:—

"*Accipiter virgatus*, Temm. A single specimen, a female, which I refer to this species, was obtained [at the Andaman Islands]. If *gularis* of Schlegel be admitted as distinct, this bird might stand under the latter name, inasmuch as its fourth quill is considerably longer than the fifth, whereas in all my twelve specimens from various parts of the Himalayas, from Murree to Darjeeling, the fourth and fifth quills are almost precisely of the same length." This rule, though generally holding good, is not universally applicable: the Norwich Museum possesses an adult male of *A. virgatus*, from Java, in which the length of the fourth primary exceeds that of the fifth by ·55 inch; but in two other Javan specimens in the same collection no such peculiarity exists.

On the other hand, in six specimens of *A. gularis* from Japan and Formosa which I have examined, the fourth primary exceeds the fifth in length, but the excess is very variable, being in one specimen ·05 inch, in a second ·1, in a third ·15, in a fourth ·25, in a fifth ·75, and in a sixth ·8.

The question whether this larger race should be treated as distinct, is one which individual ornithologists must decide according to their own estimates of what is sufficient to constitute specific distinction; but on another point connected with the synonymy of *A. virgatus*, I venture to think that Mr. Sharpe is certainly mistaken, viz. in not admitting the specific distinctness of *Accipiter stevensoni*, which, in my opinion, undoubtedly is, as Mr. Sharpe, in a footnote, admits that it may be, a good and valid species.

Both the tarsus and the middle toe are, on an average of specimens, decidedly shorter in *A. stevensoni* than in *A. vir-*

gatus; and the two species also differ in their markings and coloration.

I have lately remeasured ten specimens of *A. stevensoni* in the Norwich Museum; and although the dimensions of some of them have been already given in 'The Ibis' for 1863, I think it convenient, for the purpose of comparison, here to insert the following particulars :—

	Wing from carpal joint. in.	Tarsus. in.	Middle toe, s. u. in.
Presumed males:			
From Pekin	6·55	1·7	1
From Macao	6·8	1·8	1·05
Ascertained male:			
From Chefoo..................	6·65	1·8	1·1
Presumed females:			
From China (exact locality unknown)	7·7	1·9	1·2
From Singapore	7·25	2	1·15
Ascertained females:			
From Shanghai................	7·7	2·05	1·2
From Java....................	7·4	2	1·15

The last-named specimen was obtained by the late Dr. Bernstein, who appears, by the ticket which is attached to it, to have recognized it as distinct from *A. virgatus*, of which he also obtained specimens whilst resident in Java.

I have not had an opportunity of examining this species in the dress which it wears on first leaving the nest; but the specimen from Singapore above referred to retains some portions of this plumage, showing that it is characterized by the feathers of the breast exhibiting a long brown mark down the centre of each feather, whilst the sides of the feather are a pure white. As the bird advances in age these longitudinal marks are exchanged throughout the breast, sides, abdomen, and thighs for alternate transverse bars of pure white and dark brown, the white bars being intersected on the upper portion of the breast by dark shaft-marks; these are also apparent on the throat, which, with that exception, is white.

So far as I have observed, the female undergoes no further change; but in the male all these markings, except the narrow shaft-marks on the throat and some of the white transverse bars on the abdomen, gradually disappear and leave the entire remainder of the undersurface of a fawn-colour, which, however, is hardly so dark as is represented in pl. ii. of 'The Ibis' for 1863.

The three remaining species of the group are *A. rhodogaster, A. sulaensis,* and *A. madagascariensis.* The measurements of the first of these, as given by Mr. Sharpe, appear to have been taken from a male bird; and I may therefore mention that the detailed dimensions of two females are given by Lord Walden at page 110 of the 8th volume of the Zoological Society's 'Transactions.'

In the case of the nearly allied *Accipiter sulaensis,* Mr. Sharpe gives the measurements of the type specimen, a female in the Leyden Museum, which I believe is the only specimen of this Hawk at present existing in any European collection.

The specific name of *madagascariensis,* which has been long used to denote *Scelopizias franciscæ,* has been proved, by Mr. Sharpe's discovery of the type specimen in the British Museum, to be really applicable to the much scarcer Madagascar Hawk which has hitherto been usually known by the name of *Accipiter lantzii,* and which is fully described in Mr. Sharpe's volume under its prior appellation of *madagascariensis.*

[To be continued.]

XLV.—*On the Immature Plumage of* Rhodostethia rosea.

By Howard Saunders, F.L.S., F.Z.S.

When visiting the collection of Laridæ formed by the late Herr Brüch in the Museum of Mayence, I was already aware that amongst its principal attractions were specimens of the rare Cuneate-tailed Gull, *Rhodostethia rosea,* Macgill. Of this interesting species all the examples hitherto examined have been adults, and, with one exception, in summer plumage, as marked by the black collar; my surprise and delight may therefore be imagined when, on proceeding to the case containing the Laridæ, I saw before me two specimens of this rare bird in *immature plumage.* Not being aware of any account of this interesting stage, and presuming that it will be equally new to most ornithologists, I do not hesitate to give a description of it.

Bill black, feathered to base of nostril, thence to tip ·6 in.; from gape to tip 1·2 in.

Head white; a few dark hairlike feathers round the eye of one specimen, and beneath the eye of the other; black collar slightly developed on the one, distinct in the other, especially on nape.

Breast pure white, with a pink tinge on the lower part and on the abdomen.

Mantle to rump grey, lighter on shoulders.

Wing: length (underneath measurement) 9·4–9·5 inches. Primaries, 1st, 2nd, and 3rd smoke-brown on outer web and shaft, this colour running round the tip and some way up the inner web, the remainder of which is white; on the 4th and 5th the white portion increases, but the shaft continues dark, although successively becoming lighter, till on the 10th it is pure white; in the 6th the dark marking on the webs becomes a brown bar, which gradually decreases until it is nearly lost in the 9th, and totally so in the 10th primary, which is entirely white. These dark tips give a very pretty barred appearance to the wings. Secondaries pearl-grey, passing into white, thus forming a white band. Carpals and upper wing-coverts smoke-brown, faintly tipped with white; lower wing-coverts grey, like the mantle, but tertials smoke-brown.

Tail consisting of twelve feathers, pure white in one specimen; in the other the 3rd and 4th feathers on each side are barred with smoke-brown; the 4th projects beyond them a trifle, the 5th decidedly, whilst the central feathers extend ·75 in. beyond the 5th, making total projection about one inch. Total length of tail 4·5 inch; wings in stuffed specimen reach a trifle beyond tip.

Tarsus 1·15–1·2 in., middle toe 1·2 in., outer toe 1·1 in, inner toe ·95 in.; hind toe and nail well developed; nails black. Colour of legs and feet (evidently much faded) yellowish clay.

I am inclined to think that these are birds of a trifle more than a year old, just beginning to lose the black collar which they assumed for the first time in the spring of the year in which they were obtained; but considering the utter want of trustworthy data respecting the time occupied in acquiring the successive stages of plumage, this is mere conjecture and given for what it is worth.

The history of these specimens is not very satisfactory. They were purchased some years ago from the Maison Verreaux, and were stated to have come from Kamtchatka. When the late M. Jules Verreaux was staying with me in 1870, I had a good deal of conversation with him about Laridæ and the Brüch collection, and I remember his expatiating upon the beauty, and especially the lovely rose-tint, of two specimens which he had sent to the Mayence Museum; he also persisted that they really did come from Kamtchatka, and that he had had them from a Pole who had been there. It was impossible to contradict him; but for various reasons, upon which I need not enlarge, I was sceptical as to the locality, and continue to be so. It is true that another arctic species (*Xema sabinii*) has been found breeding in both continents; but then its range can be traced from Greenland right across the American continent, and it is quite natural that it should pass into Siberia; whereas the Americans, with all their energy and research, have hitherto failed to acquire a single specimen of *Rhodostethia rosea,* either in their own Alaska possessions, or in those portions of Kamtchatka visited by the United-States-Telegraph Surveying Expedition, which was accompanied by most able naturalists. In fact, what little we do know about this Gull tends to show that its habitat is extremely restricted; but upon this point it is needless to say more, as our Arctic expedition will, we trust, give us some further account of it.

It may be as well to give a revised list of the specimens of this rare Gull existing in collections.

One in the Derby Museum, Liverpool, which may be the type, obtained at Alagnak, 69½° N. lat., Melville Peninsula, 23rd June 1823.

One in the Edinburgh University Museum, marked ♂, Iglorlik, Melville Peninsula, 27th June, 1823.

One in the University Museum, Cambridge, from Green Island, Disco Bay.

Three in the Copenhagen Museum, from Disco Bay.

One from Færöe Islands (Suderöe), in Herr Benzon's collection.

One from Heligoland, Herr Gaetke's collection.

Two in Mayence Museum, Kamtchatka?

One in Sir William Milner's collection, said to have been killed in Yorkshire. This one has no black collar.

Total eleven.

Besides these there is said to be another in Copenhagen, obtained by Hölboll.

XLVI.—*Notes on some new Central-Asiatic Birds.*

By Dr. N. Severtzov.

Picus leptorhynchus, Sev.

This species, though closely allied to *P. major*, which it represents in the evergreen-tree groves of the lower Tianshan, in the Turkestan gardens, and the saxaul (*Haloxylon ammodendron*) forests of the desert, yet shows a constant difference, which I have verified by an examination of about forty specimens of each species. The comparative diagnoses of the two are as follows:—

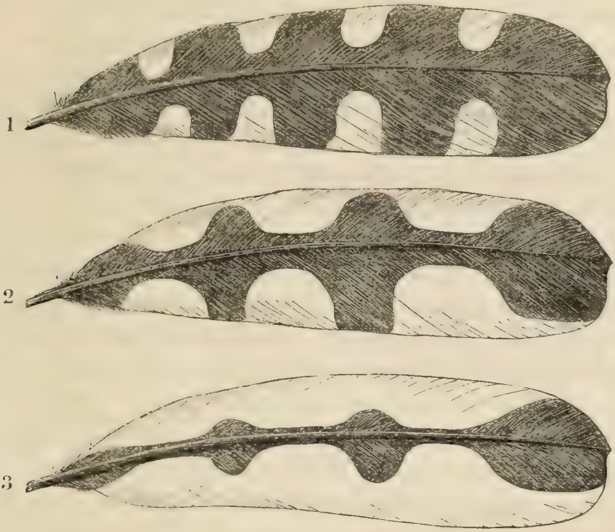
Picus leptorhynchus: Bill slender; hinder wing-coverts, on the humero-cubital articulation, white to the smallest upper ones inclusively; secondary quills with but *three* (only *two* uncovered by the larger tectrices) very broad white markings on each web, and a continued *white outside edge*, at least on the tertiary quills, sometimes also on most secondaries; primaries also with broad white markings, and, though the ground-colour along the shafts of all quills is black, yet this black occupies on the feather less space than the white. Tail-feathers black, only the *two* outermost with larger fulvous markings on the terminal half, the third with a very small fulvous tip only; these light markings are somewhat individually variable in shape, but always lighter fulvous, and occupying less space on the feather than those of *P. major*. The under-parts almost pure white, slightly tinged with straw-yellow; the abdominal red reaches to the upper half of the sternum; the 3rd quill shorter than 6th, the 1st quill abortive, about as long as its coverts, longest 4th = 5th > 6th > 3rd > 7th > 2nd > 8th, &c. The white cheeks are separated by a black transverse bar from the white sides of the neck; the scapulars are white, as in *P. major*, to which, except in the above particulars, this bird has a strong resemblance in general colouring and sexual difference, the adult male having also a red bar across the nape, the female none, and the young male a red patch on the crown. The size is generally smaller.

Males:—length 10–10·7 inches, expanse 15·8–16·4, wing 5·1, tail 4·2, bill 1·2–1·3 long from forehead, and 0·25 high at the forehead. The female is somewhat smaller, and has a shorter bill, only 1·1 long and 0·25 thick at front; general length 9½–10, expanse 15–15¾, wing 4·7, tail 3·7. Old specimens of both sexes, but the females more rarely, have sometimes some slight indications of a narrow light vermilion band across the breast, between the ends of the black neck-bands.

β. Var. *leucoptera*: Resembles the typical *P. leptorhynchus*, but has more white on the wing, especially on the secondary quills, which are sometimes almost completely white, with a sinuated black band, or even a series of black central spots along the shafts, as shown in the following cuts (p. 489).

I have observed many intermediate quill-colourings between figs. 2 and 3, but never between figs. 2 and 1; and therefore the var. *leucoptera* of *P. leptorhynchus* is only a variety, not a species, though it widely differs in wing-colour (but nothing else) from the typical *P. leptorhynchus*.

P. major, it may be remembered, has a stout bill, *four* small white markings on the edge on each web of the secondaries, of which *three* are uncovered, similar small white markings (decreasing in number), but no white outer edge, on the tertiaries, *three* outer tail-feathers largely marked with fulvous, a more or less brownish white or dingy light brown underside, and the red of the belly reaching only a little upwards to the lower edge of the sternum.



Secondary quill, fifth from behind, counting the three tertiaries:—
1. *Picus major*: 2. *P. leptorhynchus* typicus; 3. *P. leptorhynchus*, var. *leucoptera.*

It is also larger. Length 11–11½ inches, rarely about 12; wing 5·7–5·8; tail 3·7–3·9; bill 1·1 to 1·15 long from forehead, and 0·32–0·35 high at the forehead; female with a bill 1·1 long and 0·32 high. Remiges 4 > 5 > 3; these almost equal, all longer than 6; rem. 2 = 8; the first spurious considerably longer than its coverts. *P. major* is found also in Turkestan, but only in the extreme north-east, in the mountain-forests north of Kuldja.

Other species allied to *P. major*, such as *P. numidicus*, *P. syriacus*, *P. majoroïdes*, *P. himalayanus*, *P. mandarinus*, etc., are still more different from *P. leptorhynchus* than is the common European *P. major*.

The typical *P. leptorhynchus*, as well as its white-winged variety, are resident the whole year in Turkestan, being only somewhat migratory in winter, as are other Woodpeckers. The typical form inhabits the lower forests of tree-groves of the Tian-shan (being rarer in Karatau)—groves of wild apricot, walnut, ash (*Fraxinus*), elm (*Ulmus*), and poplar—getting in the interior as far up as the poplar grows, to about 8000 feet on the Albash, a river falling into the Naryn or Upper Syr. It is also not scarce in the gardens of the cultivated zone at the foot of the hills, from Turkestan north-west, and Samarkand south-west, to Kuldja east. I found it particularly numerous and quite common around Tashkend, where the innumerable small fruit-gardens and plantations join each other so as to form a sort of forest, extending for several miles. It is not a shy bird, and is very similar to *P. major* in its manners, flying from tree to tree, and then exploring each for food, which consists chiefly of small bark-frequenting coleoptera and their larvæ, also, but, to less extent, of small tree-climbing ants, as shown by the contents of the stomachs of the birds collected. It is more shy and retiring in the breeding-season. I obtained only one newly fledged young, a male, to more than forty adult birds, and found no nest, either of the typical or of the white-winged variety. It conceals itself for breeding in May; the young are fledged in July; and in September old and young have already the adult plumage.

The white-winged variety was found by me in the denser saxaul forests of the Lower Syr, between Iany-kurgan and Peroffsk, and on the Iany-Darya, a river flowing (only during the summer floods) from the Syr towards the Lower Oxus, and on the banks of this last stream, in the north-eastern parts of its delta. This variety is the single saxaul Woodpecker, yet somewhat scarce and somewhat more shy than the typical bird, though generally not very difficult to approach within easy shot. The white-winged Woodpecker of the Tarim river-system, south of the Tian-shan range (precise locality unknown to me), found by Capt. Biddulph, and shown to me by Mr. Gould, is completely identical with the white-winged saxaul variety of *P. leptorhynchus*.

CAPRIMULGUS ARENICOLOR, Sev. (falso *C. isabellinus*, Sev., nec Temm.).

Closely allied to *C. ægyptius* (*C. isabellinus*, Temm.), but *much larger*, 1½–2 inches longer, wing almost 1½ longer; bill, however, smaller; wing less pointed, rem. 2>3>1; colour somewhat more *greyish sandy*, but all markings nearly the same; sexual difference trifling, the adult male has one outermost tail-feather on each side broadly tipped with white, the female with isabelline; the young male individually varying in the colour of these tips, which he has sometimes white, like the old male, sometimes isabelline, like the female, and sometimes of both colours (that is, white shaded with isabelline).

Length 10½–11 inches, expanse 24–26·6, wing 8·4, tail 5·3, bill 0·42. *C. ægyptius* has a total length of 9 inches, wing 7, bill of 0·6, and is more rufous isabelline, rem. 2>1>3.

Further particulars on the geographical range and habits of this bird will be given by me in 'The Ibis,' in Mr. Dresser's extracts from my 'Turkestanskii Jevotnyi' (Turkestan vertebrate animals). Here I remark that it is common only on the lower Oxus, rarer on the Syr and in the south part of the east Caspian shore; everywhere a summer bird.

PHASIANUS SEMITORQUATUS, Sev., new species? or variety?

A near relative to *P. mongolicus*, the male differing in some important particulars; the female less so, and may easily be confounded with the female of that species.

Male. General colour a bright, moderately intense rufous chestnut, with metallic gloss, as in *P. mongolicus*, and quite similar small, black, metallic green-glossed feather-tips, which are also, in the same way, differently shaped on different parts of the body—very narrow, on some feathers disappearing, edges with a central small black blotch at the end of the shaft on back and breast, broader black ends on the sides.

But on closer examination all the feathers of the head and neck are not quite so metallic green as those of *P. mongolicus*;

they are *opaque black*, with glossy green tips, which are broadest on the head; the *upper throat quite opaque black*, without any glossy tips, while that of *P. mongolicus* is always dark purple all over, with a slight coppery gloss.

Instead of the broad completely white collar (interrupted on the throat) of *P. mongolicus*, there are only a few white tips on the green of the lowest side neck-feathers, showing *traces* of a white collar; hence the name.

The metallic gloss of all the chestnut feathers is uniformly green on the whole body of this new Pheasant, while it is partly green and partly purple in *P. mongolicus*.

The cubital and carpal wing-coverts have dingy blackish centres, varied with fulvous white, and broad, light silvery, bluish-grey edges and tips, which are almost alone visible when the feathers are in order; this is just the wing-colour of more eastern Chinese Pheasants, such as *P. torquatus*, *P. decollatus*, *P. elegans*, and very different from the uniform silvery white, without any markings, of *P. mongolicus*.

These are the only differences; in other respects the two species, *P. mongolicus* and *P. semitorquatus*, are similarly coloured.

Quills of this last:—the 1st almost spurious, half length of the second, which =7th; 3rd, 4th, 5th about equal and longest.

A single male, in adult plumage, but not quite moulted, and with a tail not full-grown, was shot at Kiytin, north-east of Kuldja, a steppe locality with a rivulet and marshes, near the northern foot of the Tian-shan, on the way from Kuldja to Urumtsi. It was shot the 18th (30th) August, 1874, by the Cossack Tchadov, a préparateur once taught by me, and then employed in a surveying party by General Kolpakowsky, Governor of Semiretchie. The measurements in the flesh, noted by Tchadov, are, 31¼ inches length, 32 expanse, from skin, tail 15½, wing 9·8.

I am uncertain whether a female, with remains of nest-plumage, shot by the same man about a week earlier, near Lake Ebe-nor, belongs to this species or *P. mongolicus*, being shot at the very limit of the range of both. On superficial comparison it showed no difference whatever from the latter. Not having my whole collection at hand for a closer comparison, I do not describe this female without identifying it with greater certainty. The following is a short comparative diagnosis of all the Pheasants met with from the northern slopes of the Tian-shan to the Caspian:—

1. *Phasianus semitorquatus.* Capite et collo atris, opacis, apicibus plumarum nitide viridibus; collari albo imperfectissimo, ex aliquot singulis plumis colli, versus scapulas, albo apicatis; corpore toto læte rufescenti-castaneo nitore ubique viridi; apicibus plumarum pectoris latis, angustissime nigro marginatis; tectricibus alæ carpalibus et cubitalibus tricoloribus, argenteo-cano-cærulescentibus et nigricante diluteque fulvescente centratis: uropygio metallice viridi; rostro crasso, robusto.

   Mongolia meridionalis, prope mont. Tianshan, versus orientem a lacu Ebe-nor.

2. *Phasianus mongolicus.* Capite et collo metallice viridibus, gula obscure purpurea, nitore aliquot cupreo; collari lato, toto albo, gula interrupto; corpore toto læte castaneo-rufo, metallice nitente, nitore partim viridi, partim purpureo, lateribus rubescenti-aureo; plumis pectoris latis, solo apice anguste nigro marginatis; ingluvie unicolori, apicibus nigris nullis; tectricibus carpalibus et cubitalibus unicoloribus, argenteo-albicantibus; uropygio purpurascenti-viridi, unicolori vel tenue canescente fasciolato: rostro valido.

   Ad fl. Iaxartem, in vallibus magis occidentalibus montium Tian-shan, et prope lacus Iassyk-kul; in fruticetis et arundinetis fluviatilibus ad fl. Ili, lacus Balchasch et Ala-kul; rarius ad lac. Nor-Zaissau.

3. *Phasianus chrysomelas**. Capite et collo metallice viridibus, gula chalybeo-cyanea; collari albo imperfecto, ex plumis viridis, transversim albo fasciatis et maculatis; corpore toto intense rufescenti-aurantiaco, nitore metallice aureo fulgente; plumis pectoris latis, latissime apice colore nigro, viridi nitente, marginatis; hæc nigredo ingluvie colorem aurantiacam fere obtegit; uropygio rufo, metallice cupreo-purpurascente, transversim nigro fasciato;

---

* I sent, in October 1874, a notice, with diagnosis, of this bird to the Society of Naturalists in Moscow, under the name *P. chrysomelanos* (more correctly *P. chrysomelas*), and am told the notice was printed in the 'Bulletin' of that Society about December 1874.

tectricibus carpalibus et cubitalibus unicoloribus, argenteo-albis: rostro parvo, gracili.
Ad fl. Oxum inferiorem collectus.

4. *Phasianus persicus.* Capite et collo metallice viridibus, torque nullo, ut in *P. colchico*; sed albedine alarum, ut in *P. mongolico*; plumis pectoris lanceolatis, toto limbo, non solo apice, tenuissime nigro marginatis; cæt. fere ut in *P. colchico*, a quo alis et pectore præsertim differt.
In sylvis Persiæ borealis, versus mare Caspium, vicinitate urbis Astrabad specimen unicum mihi notum occisum, nunc in mea collectione.

P.S. I have seen, in the collection of Mr. Gould, a specimen termed by him *P. mongolicus*, which has the same large white collar, the same purplish throat with rusty feather-bases, widely different from *P. semitorquatus*, but resembling in the greenish general gloss and the wing-colour this last, and *not* the typical *P. mongolicus* of the Syr, collected by me in great numbers. This specimen of Mr. Gould's was received from St. Petersburg, without indication of locality, and looks, to my eyes, to be perhaps a hybrid between the two races *P. mongolicus* and *P. semitorquatus*, which meet each other near Lake Ebe-nor.

Thus *P. semitorquatus* requires further study, as I do not consider it definitely established from an examination of a single specimen. The same remark perhaps applies to *P. persicus*.

But *P. chrysomelas* is a species resting on constant characters, as seen by an examination of many specimens of both sexes and all ages.

XLVII.—*Notices of recently published Ornithological Works.*

Though Dr. Coues's 'Birds of the North-west'* would seem by its title to treat only of the birds of a limited though extensive area of North America, it includes ornithological matter of importance far exceeding the requirements of a simple exposition of a local fauna. One of the chief features of the work is the elaborate list of references attached to the name of each species mentioned. These are followed by a general outline of the range of the species, and a list of the specimens, if any, obtained by the surveying expeditions. Dr. Coues's own notes on many of the species observed by himself are added; or when a species had not personally been encountered by himself, extracts from other sources on the same points are given. In the latter part of the book the North-American members of the Laridæ, Colymbidæ, and Podicipitidæ are treated in full in the form of monographs.

---

* Birds of the North-west: a handbook of the Ornithology of the region drained by the Missouri River and its Tributaries. By Elliott Coues, Captain and Assistant Surgeon U.S. Army. 8vo, pp. 791. Washington: 1874.

Thus it will be seen that this is a work of no ordinary importance; and that it is the product of a man who is no less skilful with his pen, his gun, and his scalpel will not detract from its value. In spite of all that has been written on the birds of North America, hardly a page of Dr. Coues's book but contains fresh matter of interest. Having said thus much in general praise of really excellent work, we trust we may be permitted to make a few remarks upon the treatment of the subject in several matters of detail and some of principle.

We regret to see that recent American writers almost invariably give as the authority for the locality where a species has been procured, not the collector's name, but that of the author who happened to publish the fact. How much science would lose in interest if the late Mr. G. R. Gray's name were given instead of Mr. Wallace's as the authority of the numberless species obtained by the latter gentleman in the islands of the Eastern archipelago! or to take perhaps a still more patent case; and here we are sure we are speaking Herr von Pelzeln's feelings on the subject when we raise our voice against a practice which would disassociate Natterer's name from his brilliant discoveries in Brazil. First authorities are entitled to every acknowledgment; and we are somewhat surprised to see them neglected in the point referred to by authors who are exceedingly particular that each should get his full rights in connexion with the formation of new names or the recombination of old ones.

Dr. Coues has most laboriously brought together every reference he could to the species he writes about. The list of these references in many cases makes half, and in some a whole page of closely printed text. Looking at these formidable lists one cannot help asking where this is to end. Are references to be repeated again and again, even when fully given in works of easy access? The time appears to us to have come when some more rigid selection should be exercised, and those references only given which tend to throw light upon a subject under discussion. Of what use is it, for instance, to give a reference to Gray's 'Hand-list,' when, on turning to its pages, no information beyond the name is imparted?

It will be seen that this work has been some time passing through the press; for Dr. Coues's introductory letter is dated 13th May 1873, whilst the last sheet of the letterpress is signed Dec. 1874*. This doubtless accounts for some recent corrections referring to the nomenclature of American birds not having been adopted; for instance, Mr. Ridgway's error respecting the affinity of *Scops trichopsis*, Wagler, corrected in 'The Ibis' for last year (1874, p. 314), is repeated (p. 303), and Mr. Ridgway's determination confirmed, it is said, by an examination of the typical specimens. Not typical of *S. trichopsis*, surely! the types of which species, if they are in existence at all, are in the Museum at Würtzburg.

In his monograph of the North-American Laridæ Dr. Coues travels over old ground, enlarging and correcting his previous essay on the same subject published in 1862. There are one or two points in nomenclature of some species from which we withhold our assent; but otherwise we can speak in terms of unqualified praise both of this monograph and those on Colymbidæ and Podicipitidæ, which follow. As regards *Xema furcata* (why usually written *furcatum* we know not), the non-appearance of which has so long puzzled American ornithologists, the following note may throw some light on this obscure point. So far as we know, only two specimens exist in museums:—

---

* Mr. Ridgway tells us (Bull. Geol. & Geogr. Surv. 1875, p. 57) that it was not issued till February 1875.

one, now in Paris, obtained by Néboux (who accompanied the French frigate 'Vénus'), it is said, at Monterey, on the Californian coast; the other, now in the British Museum, by Capt. Kellett and Lieut. Wood, it is said, off Dalrymple Rock, Chatham Island, one of the Galapagos archipelago. Now it is somewhat remarkable that, of all the naturalists who have collected on the western shores of North America, only those who have *also* visited the Galapagos Islands (for Néboux was there) have obtained this Gull. The suggestion seems inevitable that the continental locality, Monterey, is erroneous, and that the bird is probably exclusively found in the Galapagos Islands. This is further borne out by the fact of several of Néboux's other localities for the birds collected by him having proved to be wrong—such as *Calliste ruficervix*, which is said to have been obtained from Guatemala, instead of Columbia or Ecuador. Mr. Saunders's suggestion, as quoted by Dr. Coues, that the bird is of arctic origin, must be taken for what it is worth, seeing that the bird has not yet been obtained in the far north. Still, even were its arctic characters established, it may yet be an inhabitant of the Galapagos Islands, where an *Otaria* belonging to a northern species exists and formerly abounded.

Dr. Coues, following several American ornithologists, takes the tenth instead of the twelfth edition of the 'Systema Naturæ' of Linnæus as the proper commencement of the present system of nomenclature, and on this basis makes several changes in old-established names. He holds that no good reason was ever given for adhering to the twelfth edition as the starting-point. To consider the latter as the *perfected* work of the promulgator of the binominal system, and as such to be a fitting point from which subsequent work should be added, seems a sufficient reason in itself; but it is strengthened in no small degree, since it discountenances some at least of those changes of old names which are so disheartening to those who aim at the study of higher branches of the science than its mere alphabet, synonymy. What possible advantage can accrue from calling the Black Tern *Hydrochelidon lariformis* (Linn.), Coues, instead of simply *Hydroche-*

lidon fissipes (Linn.)? It is true, Dr. Coues says he hopes he will not be accused of arbitrary innovation; but this disclaimer we take to be the "rhetoric of an uneasy conscience."

The system recently come into vogue amongst American writers on ornithology, of introducing names for "varieties" in addition to generic and specific names, is further carried out by Dr. Coues in this volume. But it would seem that the term "variety" is receiving a wider application, judging from the treatment of the northern and southern Stilts (*Himantopus*) of America (p. 462)*; so that a new term will shortly be required to express still finer gradations of observable differences. One thing seems certain respecting this system, viz. that it tends to "polynominalism'—a doctrine openly preached by Dr. Coues, but not as yet practised, but yet a doctrine, so far as trinominalism is concerned, to which he has actually converted Mr. Ridgway, who, in a recent paper, puts the system in practice.

The Birds of Prey have during the last two years come in for an unusual amount of attention. In 1874 both Baird, Brewer, and Ridgway's volumes on North-American birds, in which these birds were, so far as North America is concerned, fully treated, and Mr. Sharpe's 'Catalogue of Birds,' vol. i., containing Accipitres, saw the light. But the energy expended in these volumes does not seem by any means to be exhausted; for Mr. Ridgway has recently sent us 'Outlines' of what professes to be a natural arrangement of the Falconidæ, extracted from the 'Bulletin of the United-States Geological and Geographical Survey of the Territories,' June 10, 1875.

The arrangement adopted by Mr. Ridgway is nearly that of Professor Huxley (P. Z. S. 1867, p. 415); and the characters there shown to exist in the way in which the ends of the coracoid, clavicle, and scapula meet, are further investigated; and two subfamilies are formed, Falconinæ and Buteoninæ, chiefly upon the fact of the scapular process of the coracoid meeting the scapula or stopping short of it when the clavicle is thrust in between these bones. This arrangement places in close contact the *Polybori, Falcones, Micrastures,* and *Herpetotheres,* birds widely distinct in many other respects—so much so, that we feel strongly disposed to doubt the value Mr. Ridgway places upon these characters in a primary sense.

---

* *H. brasiliensis* is put (with a query, it is true) as a "variety" of *H. nigricollis*; but not a word do we read of intermediate examples. Concerning the former, Dr. Coues says that Messrs. Sclater and Salvin omit to state in their paper (P. Z. S. 1873, p. 454) that the black of the neck in *H. brasiliensis* is separated from that of the back by a white interval. He cannot have read the diagnosis of this species as given in that paper, where attention is expressly drawn to this character.

Be this as it may, we are still of opinion that Mr. Ridgway's treatment of his subject is the right one; for he seems disposed to bring all available characters to bear upon it. We wish we could share his confidence in submitting his arrangement as really a natural one in outline; but when the *value* of characters has to be considered, be they genetic or analogical, we cannot contemplate any such finality. Mr. Ridgway has a paragraph on the importance of distinguishing between these two classes of characters, which cannot be impressed too forcibly; but there is a mental tendency, of which Mr. Ridgway appears to have his full share with the rest of us, to regard the selected characters in a classification as genetic, and the rejected as analogical. We are not sure that we appreciate the full meaning of the paragraph referred to, when read by the light of the examples. One thing seems certain, that the word "mimicry," as applied to *Pandiones* and *Haliaeti,* is used in a sense quite different from that in which it is employed by Mr. H. W. Bates in his now celebrated article (Trans. Linn. Soc. xxxiii. p. 495). There is, we believe, one notable case of true mimicry in Brazilian Hawks of the genera *Accipiter* and *Harpagus,* where the Sparrow-Hawk *A. pileatus* wears the exact garb of the insect-eating *Harpagus diodon.* Mr. Wallace has already alluded to this instance of mimicry amongst birds, to which we believe we first called his attention (*cf.* Wallace, 'On Natural Selection,' p. 107).

Mr. Ridgway is a little hard upon the systems of his predecessors over the same ground. We are not disposed to enter the lists in their defence, as they are fully capable of defending themselves; but it must be borne in mind that the materials at the disposal of European ornithologists, at least of many of them, though not perhaps including specimens of single species by tens and hundreds, still cover more ground and are far more complete than any thing yet amassed in America. Conclusions based on such material are deserving of great consideration; and, above all things in questions involving what must for a long time to come be matters of opinion, any thing like dogmatic criticism had best be avoided.

Besides the previously mentioned paper, Mr. Ridgway has sent us two others upon Accipitres, both published in the Proceedings' of the Academy of Natural Sciences of Philadelphia (pp. 78–119, 1875?). The first relates to *Accipiter* (or, as here called, *Nisus*) *cooperi* and *A. gundlachi*. The latter bird, of which we have never seen specimens, Mr. Ridgway considers to be a species distinct from the former. Mr. Lawrence's original description is reproduced and its correctness indorsed in the present paper.

The second of these papers is "on the Buteonine subgenus *Craxirex*, Gould." In it the American species of *Buteo* are divided into two subgenera—one being distinguished by having four primaries "emarginated" on their inner webs, whilst the other has only three. To the former *Buteo vulgaris* belongs; to the latter all the South-American Buzzards, except *B. abbreviatus, B. minutus,* and *B. brachyurus,* but in it two northern species also, *B. swainsoni* and *B. pennsylvanicus,* are included.

Great stress is laid upon the importance of this character; but when we consider the similar case of the Harriers (*Circus*), of certain Humming-birds, of the rectrices of certain Snipes, and other instances which will readily suggest themselves, we cannot but think that this character is, in some of the birds grouped under the name *Craxirex,* only one of analogy. We cannot think that *Buteo vulgaris* is more nearly related to *B. brachyurus* than it is to *B. swainsoni*; yet this is what Mr. Ridgway would have us believe. The different plumages in which *B. swainsoni* presents itself are fully described; and very various they are. This bird a few years ago was very imperfectly understood; now, however, the contrary may be said, due chiefly to the labours of American ornithologists, and especially to the large series of specimens so industriously brought together by the authorities of the Smithsonian Institution.

Another paper of Mr. Ridgway's treats of a favourite subject of his, the genus *Leucosticte*, and, we may add, exhaustively; for, judging from the extent of the materials at his command, numbering some hundreds of specimens, little must remain to be said of the relationship existing between the American members of the genus. Of the Old-World species of *Leucosticte* little is said beyond referring them to a new subgenus, *Hypolia* (a name introduced, after a growing practice among ornithologists, in a foot-note, without formal characters). Four American species of this genus are now recognized, viz. *L. atrata*, *L. tephrocotis*, *L. australis*, and *L. brunneinucha*; of these the second is subdivided into three varieties or races—*L. tephrocotis*, *L. littoralis*, and *L. griseinucha*. Specimens of *Leucosticte* a few years ago were considered amongst the rarities of a collection; but this can scarcely be said to be the case now. Mr. Ridgway tells us of a collector who pursued a flock of these birds, killing fifteen and twenty at a shot, till he had killed 350; a friend followed him about with a board, upon which the bodies of the slain were laid. We can only hope that these all came under Mr. Ridgway's eye, and helped him to form his conclusions.

Colonel Irby's book* is one that will bear favourable comparison, to say nothing more, with any work of the kind that has of late appeared, and is a very welcome addition to ornithological literature. Its author must be already well known to our readers from his "List of Birds observed in Oudh and Kumaon," published long ago in these pages (Ibis, 1861, p. 217); and 'The Ornithology of the Straits of Gibraltar' will not fail to add to his reputation as an excellent observer. His notes are just of the right kind, and are not overladen by any extraneous matter. For the northern sides of the Straits he depends almost entirely on his own resources, gathered during his more or less prolonged stay at "the Rock" between 1868 and 1874; but with respect to the southern side, his information, he tells us, is chiefly drawn from a MS. of the late François Favier, the collector, who resided more than thirty years at Tangier, which MS. Col. Irby obtained at an exorbitant price. In both cases he has also availed himself of the various papers by Lord Lilford, Mr. Saunders, and the late Mr. Tyrwhitt-Drake, which have appeared in 'The Ibis.' We consequently have in this volume about as good an account of the ornithology of the Straits as could at present be composed, though our gallant friend assures us, and no doubt with truth, that "there is ample room, for any one with energy, to work out a great deal more information" on their birds.

---

* The Ornithology of the Straits of Gibraltar. By Lieut.-Colonel L. Howard L. Irby, F.Z.S. &c. London (Porter, 6 Tenterden Street): 1875. 8vo, pp. 236.

As most of our readers will doubtless possess themselves of Col. Irby's book, we need not do more than refer to a few points in it that seem especially to deserve notice in these pages. He condemns as "apocryphal" (p. 61) the story which, originating with Favier, was first published in 'The Ibis' (1862, p. 27), as to the interbreeding of *Asio capensis* and *A. accipitrinus*, remarking that, so far as his observation goes, the latter is only a winter resident in Andalucia, where it is not very abundant, and accordingly its breeding, even when tempted by a tawnier partner, so far south as Morocco is not very likely. Oologists have long vaguely talked of the tame *Cursorius gallicus* which used to lay eggs, to the no small profit of its owner, at Tangier. We are glad to have its history here given (p. 157) in detail: it seems to have laid three dozen of eggs in six years, after which it fell a victim to the war between Spain and Morocco*. On the whole

---

* We may observe that these eggs, of which we have seen several, do not bear out the statement made by Mr. Hewitson (Ibis, 1859, p. 79) that they are "smaller and more faintly coloured" than those laid by the wild bird.

Col. Irby includes 335 species as certainly found on one or the other side of the Straits, besides naming 25 more as possibly occurring there; but he adds that "doubtless many other species are to be found as stragglers; and so local are birds in Southern Spain, that perhaps some may be resident, and overlooked in consequence of the exact locality they frequent having been unvisited." We are sorry to see that he has followed Mr. Sharpe in the nomenclature of the diurnal birds of prey. We take this opportunity of saying that the *Accipiter korschun* of S. G. Gmelin is certainly not the *Falco migrans* of Boddaert, and therefore to call the Black Kite *Milvus korschun* is wrong. We must also protest against *Circus cineraceus* being named *C. pygargus.* Any but the most cursory inspection of Albin's plate, on which *alone,* according to Mr. Sharpe (but according to no one else), Linnæus founded his *Falco pygargus,* will show that it is a composite design, having been drawn from a specimen of *C. cyaneus* and coloured from one of *C. cineraceus.* The specific name *pygargus* was long ago most properly consigned to limbo; and Mr. Sharpe did most inconsiderately in attempting its revival. In conclusion, we must remark with pleasure that Col. Irby's book is accompanied by two useful maps; and herein, as in many other respects, we commend his example to the authors of faunistic works.

Mr. Harting's volume on our Summer Migrants* forms a useful addition to our home literature, and will, we doubt not, be appreciated by those who, residing in the country and following out-of-door pursuits, have frequent opportunities of seeing the birds Mr. Harting writes about in their summer quarters. Forty-nine species come under Mr. Harting's definition of "summer migrants," amongst which several stragglers, such as the Rufous and Orphean Warblers, are included. The accounts of most of the species are headed by a woodcut by Bewick—the publishers (Messrs. Bickers and Son) possessing many of the blocks said to be by that well-known engraver. These will doubtless help the uninitiated reader to some extent to make out the species; but where no cuts are given, such persons will have some diffculty in recognizing the birds they see. Mr. Harting's notes give the chief outlines of the distribution of each species; and throughout the work references are freely given to aid those who would look further into this subject. On the whole Mr. Harting's remarks concerning the affinities of the different species appear to us to be sound; but there are a few to which we would take exception. The association of the Swifts and Swallows in one family, Hirundinidæ, though one of old standing, has been, we think, successfully called in question of late years. To say that the peculiarities of the Swifts as compared with the Swallows are rightly expressed by placing the former in the genus *Cypselus*, and the latter in *Hirundo*, falls far short of giving the proper value to the real differences between these birds, similar as they are in outward appearance. A family, Cypselidæ, to contain the Swifts, is at least conceded by all good systematists; and we think that they are best placed in an order, Macrochires, separate from the Passeres, to which the Hirundinidæ undoubtedly belong.

---

* Our Summer Migrants: an Account of the Migratory Birds which pass the Summer in the British Islands. By J. E. Harting, F.L.S. &c. 8vo, pp. 336. London: 1875 (Bickers & Son).

Then, again, Mr. Harting, after detailing many of the peculiar external features of the Wryneck, gives his opinion that it is best placed as a connecting link between the Woodpeckers and the Cuckoos. He lays far too great stress upon the form of the tail, forgetting that the *Picumni* of the Old and New Worlds have soft tails destitute of the pointed shafts of the true Woodpeckers. We believe that the genus *Yunx* must be associated with the *Pici*, and nowhere else.

Several pages are devoted to the habits of the Cuckoo; and theories advanced respecting the reproduction of this bird are gone into. Mr. Harting has some difficulty in accepting Professor Newton's explanation of the mode in which an hereditary tendency is acquired by the Cuckoo to seek the nests of certain birds wherein to deposit its egg. His difficulty lies in his expecting too much from the words "successfully deposited." All that seems to be required by a Cuckoo to maintain an hereditary habit of seeking the nests of particular species wherein to deposit its egg, is a knowledge where to look for a nest. The bird that has an egg to deposit, and can easiest find a nest where to put it, gives an advantage to its offspring not shared by a bird less skilled in finding nests. Hence the success lies in finding a suitable nest, and nothing beyond it, and no subsequent anxiety on the part of the parent need be exercised.

We are not told in what system the species are arranged in sequence; but to our eye the Swifts, Nightjar, Cuckoo, Wryneck, Hoopoe, come a little out of place between the Swallow and the Golden Oriole.

But we have no wish to pick holes in this book of Mr. Harting's, which deserves every success.

The first number of the new edition of Layard's 'Birds of South Africa'*, which has been announced some time, reached us too late to do more than mention its appearance in our last number. It contains the Birds of Prey nearly to the end of the Owls. In form this edition is very different from the first, being larger in size and printed in larger type and on better paper. There are also considerable alterations in the body of the work. The short descriptions in the first edition, giving an outline of the ordinal, family, and generic characters, are here entirely suppressed, and the sole descriptive part of the new edition applies to the discrimination of species. The synonymy too, brief and imperfect as it was, is also entirely cut out in the present work, as are also the native names. It may well be questioned whether Mr. Sharpe, in making these important changes, has exercised a wise discretion. One of the functions of such a work as this, and perhaps the most important one, is to assist colonists and travellers in determining the birds that come under their notice; and the omission of all the more salient landmarks to help them on their way must necessarily render the task of correctly determining the species more difficult. It is true that the generic descriptions in the first edition were most of them taken from Gray and Mitchell's 'Genera of Birds,' and doubtless require considerable revision to bring them up to the standard of the present time; but we maintain that any characters not actually incorrect, in such a work as the 'Birds of South Africa,' would be preferable to none, and we regret their omission. As regards the synonymy, we think that references to all works actually referring to the district treated of should have been given, and at least to the great works of Le Vaillant and Sir A. Smith. Instead, all references are struck out, with the exception of a single one to some illustration. To those working at home, and having books at hand, this is of comparatively small consequence; but the wants of the colonist have, we fear, been overlooked, and this we cannot but regret.

---

* The Birds of South Africa. By E. L. Layard, F.L.S. &c. New edition, thoroughly revised and augmented by R. Bowdler Sharpe, F.L.S. &c. Part I. 8vo. London: May 1875 (Quaritch).

When we come to the additions made to the account of the distribution of the different species, we see the amount of progress that has been made in our knowledge of South-African birds; and here the new edition contrasts, as might be expected, very favourably with the first.

The nomenclature employed is that used in the 'Catalogue of Birds in the British Museum;' and many of the descriptions are copied verbatim from that work—those of the "Falcones" from the volume already published, those of the "Striges" from the second, now, we believe, in the press. As this great work will, at its present rate, take perhaps twenty years to complete, some other plan for references must be adopted as the 'Birds of South Africa' passes beyond the Owls.

The work is to be completed in six parts, to "be finished in the course of the summer." The summer is now already far spent, and Part I. is all that we have seen.

The scope and object of Dr. Bree's 'Birds of Europe not observed in the British Isles'"*, the appearance of the first volume of a second edition of which we now record, having been very fully discussed in the first volume of this Journal (Ibis, 1859, pp. 81–99), it is needless for us to enter upon them again. That a second and enlarged edition is called for, is proof of itself of the success of Dr. Bree's endeavours to promote the study of European birds, upon which he may be fairly congratulated.

---

* A History of the Birds of Europe not observed in the British Isles. By Charles Robert Bree, M.D. &c. Second edition, enlarged. Vol. I. Large 8vo. London: 1875 (George Bell & Son).

While thus we sympathize with the aim of this work, we heartily wish it was in our power to accord our approval of the manner in which the execution of it has been carried out.

More is naturally expected of a second and enlarged edition of a book like the present—greater accuracy, and, on the whole, a firmer grasp of the subject; but in the present case we detect no such signs of a progressive knowledge at all commensurate with the requirements of the subject, which has during the last few years advanced with rapid strides. There is a self-satisfaction about the tone of Dr. Bree's book which has doubtless stood sadly in his way, and prevented his acquiring that knowledge of contemporary ornithologists and their writings which is absolutely necessary for the due performance of his task.

Take, for instance, his remarks in the preface upon the "confusion that has arisen in late years from the persistent habit of changing long-established names in obedience to some real or assumed priority existing one hundred or one hundred and fifty years ago." It seems almost incredible that a writer on ornithology at the present day should use the words "one hundred and fifty years ago" in connexion with the laws laid down in the 'Rules of Zoological Nomenclature;' but is not the conclusion forced upon us, that an author who uses such words must be very ill informed respecting this intricate and important subject?

As regards Dr. Bree's knowledge of contemporary writers we find him almost equally wanting. At page 58, Dr. Bree says that he wrote to Prof. Blasius for information respecting *Accipiter sphenurus*, and was surprised to receive no answer to his letter. He appears to be ignorant of that distinguished naturalist's death in May 1870 (Ibis, 1870, p. 448). Again

(p. 39), the editor of this Journal is mistaken for Mr. F. H. Salvin, one of the authors of the 'Falconry of the British Isles,' and *vice versâ*!

We have no space to enter upon the numerous shortcomings in Dr. Bree's book; but such statements as the following afford some evidence as to how far our available knowledge has been drawn upon to bring this second edition up to the mark:—

We are told that "very little, if any thing, is known of the habits and nidification of the Lanner" (p. 35). We beg to refer Dr. Bree to Mr. J. H. Cochrane's article in 'The Ibis' for 1864, Mr. Tristram's remarks (ibid. 1865, p. 256), also to Mr. E. C. Taylor's note (ibid. 1867, p. 52), and Mr. C. Farman's remarks (ibid. 1868, p. 411).

All notices of the breeding of *Falco sacer* are passed over in silence; yet surely there is no lack of information lying ready to Dr. Bree's hand. Concerning *F. eleonoræ* we have the same complaint to make; for, so far as Dr. Bree is concerned, Dr. Kruper might never have written his exhaustive article on this species (J. für Orn. 1864, pp. 1–23).

Two additional species are introduced into the European fauna in this volume, the "Striated Eagle" and *Aquila culleni*, Bree. The status of neither of these birds can be said to be very satisfactory. The former we have little doubt is the young of *Aquila heliaca*, Dr. Cullen's Tartar notwithstanding. *Aquila culleni* is based upon a living bird now in the Zoological Gardens at Antwerp. It must be here remarked that Dr. Bree has never seen this specimen, nor has any ornithologist examined it critically, except his correspondent, Professor Van den Nest, who thought it was *Aquila nævioides* till Dr. Bree persuaded him it was not. Now, as Dr. Bree could not take the Secretary of the Zoological Society's excellent advice, and study the Eagles in the Regent's Park, which were, after several years' confinement, changing their young striated plumage for their adult dress, it was hardly to be expected that he should visit the Antwerp Gardens to see the supposed new *Aquila culleni*. If he had done so, he might have given us his personal observations on the value of a "dégagée air" and "silence in confinement" as specific characters: he would, too, have been able to test the correctness of the drawing opposite page 92, in which *Aquila culleni* is represented with the nostril pointing *forwards* and *downwards*, instead of the reverse, as is the case with all Eagles we have seen in which the nostril was not round. Indeed we believe that the form of nostril shown in the sketch has hitherto only been seen in some of the American Polybori of all known Accipitres. Dr. Bree's apparent unconsciousness of the peculiarity of this character, and the introduction of such characters as "silent in confinement," was hardly to be expected after the solemn sentence in the preface in which he laments the absence of a sound knowledge of comparative anatomy displayed by so many of our ornithologists!

We think Dr. Bree has been unfortunate in his printer; for it has seldom been our lot to encounter so many misprints, which disfigure nearly every page of the volume before us.

These and other defects, which we cannot here allude to, render the second edition of the 'Birds of Europe' a work that must be trusted with care. The extremely low price of the work place it within the easy reach of many; but accuracy is even more essential than cheapness, and we again regret that the requisite care on the part of the compiler has not been expended so as to combine the two.

In Part I. Number 2, of Mr. Rowley's 'Ornithological Miscellany'*, the author continues his essays on the birds of New Zealand, and lays before his readers a plate of the rare White-faced Owl (*Sceloglaux albifacies*), drawn by Mr. Keulemans from living specimens in the author's possession. The second plate represents the White Gallinule, or *Porphyrio*, formerly in Bullock's celebrated collection, whence it passed into that of Lord Derby, and afterwards to the Liverpool Museum, where it now remains. Mr. Rowley, being unable to associate it with any other known species of

---

* Ornithological Miscellany. By George Dawson Rowley, M.A. Part I, No. 2, and Part II. No. 2. Plates, 4to. London: 1875.

Porphyrio, has bestowed upon it the name of *Porphyrio stanleyi*. That this specimen is distinct from the true *Gallinula alba* of White and Latham we fully believe; and if it be not an albino variety of *P. melanonotus*, Mr. Rowley had no choice but to act as he has done. It is strange that, though former voyagers not unfrequently speak of these white Gallinules as existing in Lord Howe's and Norfolk Islands, no specimens have reached us in recent times. We know of no other specimens in existence but the one now figured by Mr. Rowley and the specimen in the Vienna Museum, to which we had occasion to refer in a former volume of this Journal (Ibis, 1873, p. 295, pl. x.). Mr. Rowley has done good service in figuring this bird, which, be it what it may, is of high interest, both historically and in a more strictly scientific point of view.

In Part II. No. 2 (No. 1 we do not see), Mr. Rowley writes on British birds, and brings forward many notes, which a long residence in a very favourable district for observation of the straggling and migratory birds to our shores has enabled him to collect together. The subjects treated of are so numerous, and the matter so varied, that we hope to be excused going into any details on this part of Mr. Rowley's labours, we can only recommend our readers to consult for themselves Mr. Rowley's pages, wherein will be found not a few of the soluble and insoluble problems appertaining to a study of bird-life discussed.

Mons. Mulsant's work on the Trochilidæ*, of which we have had to speak on several occasions (see Ibis, 1874, p. 453, and *anteà*, p. 265), continues to make satisfactory progress. We have received two more Livraisons, which make half the second volume. Four plates accompany each part, but do not correspond to the text, being issued in advance of it. One of these represents *Lophornis adorabilis*, which M. Mulsant appears to contemplate placing in a new genus (*Dialia*), as the

* Histoire Naturelle des Oiseaux-Mouches ou Colibris constituant la famille des Trochilidés. Par E. Mulsant et feu Edouard Verreaux. 4to. T. ii. Livr. 1 & 2. Lyons: 1875.

plate in question is lettered *Dialia adorabilis*. We believe that the MS. of this work is far advanced towards completion. In its preparation M. Mulsant has spared no pains to bring it up to our knowledge of the present day. Only recently he spent several weeks in London, with the object of examining critically the collections in this metropolis.

Mr. Hume has brought his 'Nests and Eggs of Indian Birds' to a conclusion by the issue of the third and final part, of which we spoke in April last (*anteà*, p. 265). The whole book contains 662 pages of closely printed matter. Though 'Nests and Eggs of Indian Birds' is stated to be but a "rough draft," it will be of great use to ornithologists in India; and we have little doubt that the notes which Mr. Hume invites will greatly add to the completeness of the reissue of the work that is contemplated within a year. The amount of information contained in its pages is very great; but the general omission of references makes it difficult to distinguish between reprinted and fresh matter. An index to the contemplated reissue would add considerably to the utility of this book as a work of reference.

The incomplete state in which the 'Zoology of the Voyage of the Erebus and Terror' has remained for so many years, has long been a matter of regret; so that a further, and, we fear, final, contribution towards the completion of the account of the zoology of this voyage cannot but be welcomed with pleasure. It has long been known that a considerable number of plates had been drawn in addition to those actually published. Their purchase of the late Dr. J. E. Gray by Mr. Janson led the latter gentleman to obtain the cooperation of several naturalists connected with the British Museum to furnish suitable text to the plates referred to; and these contributions have been issued in the form of supplements to the parts published now more than thirty years ago. The ornithological portion is from the pen of Mr. R. B. Sharpe, who, in following out the late Mr. G. R. Gray's idea of making his contribution an account of the birds of New Zealand, has given a complete list of the birds of that colony, and incorporated into it references to the most recent authorities on its birds. A few notes are added to complete the history of some of the species.

Besides the birds of New Zealand, ten species from localities in the Southern Ocean other than New Zealand are mentioned separately, plates of all of them being given. Two of these were published long ago. The remaining eight are all from Mr. Wolf's pencil. The colouring of these, we regret to see, is not what it should be, this work having evidently been placed in the hands of an inexperienced person.

To Mr. Janson, the publisher, zoologists are indebted for bringing this work into its present state. Its actual completion is now no longer possible; for numerous drawings by Dr. Hooker, and the mass of materials collected by Sir James Ross himself, remain unnoticed. The former still exist in Dr. Hooker's possession; but the latter, we understand, have long since perished from neglect. A less ambitious aim at its outset in the scope of the 'Zoology of the Erebus and Terror,' might have brought all these materials to light, to the exclusion, perhaps, of such portions of the work as the 'Birds of New Zealand;' still we should have had a record of objects far less accessible at the present time than much that is included; moreover the contents of the work would have strictly answered to its title, which, as they stand, they do not.

XLVIII.—*Letters, Announcements, &c.*

The following letters, addressed "To the Editor of 'The Ibis,'" have been received:—

Sir,—On examining the collection of nocturnal Accipitres, in the Australian Museum, with a view to their classification, I noticed, under the name of *Strix delicatula*, a fine specimen of *Strix candida*, of Tickell, which had been shot near Sydney; but when, or by whom, is not mentioned. The facial ruff and disk of this specimen are of a snowy white, except a small spot of blackish chocolate-colour in front of the eye; the ruff is without any of those markings mentioned by Mr. Diggles as occurring in his *Strix walleri,* which is probably identical with the present species (*S. candida*). Our specimen, moreover, has only a wash of buff in the form of a band across the chest, but well defined, the remainder of the under surface white-spotted, as in Mr. Gould's figure.

I believe this is the second or third authentic instance of this species being found in Australia, and is interesting as showing its great range of habitat.

Yours truly,
EDWARD P. RAMSAY.
Curator.

Aust. Mus., May 10, 1875.

SIR,—As there has been some doubt respecting the true *Sylvia rama,* Sykes, some of the Indian naturalists believing it to be the small-billed bird (*Hypolais caligata*), whereas others consider that he described the large-billed form, it may be of interest to inform your readers that I have carefully examined the types, a male and a female from the Dukhun, and that I have convinced myself that both undoubtedly belong to the large-billed form. These two birds, which are now in the Indian Museum at South Kensington, measure as follows:—

	Culmen. in.	Wing. in.	Tail. in.	Tarsus. in.
♂	0·6	2·42	2·15	0·82
♀	0·6	2·38	2·1	0·85

I carefully compared them with examples from Etawah and South-eastern Russia, and find that the bill is as wide at the base as in any of the large-billed birds from India. It is therefore satisfactory to find that the large-billed bird will stand as *Hypolais rama* (Sykes), and the smaller one as *Hypolais caligata* (Eversm.).

I may also take the present opportunity of recording an undoubted occurrence of the Eastern Golden Plover, *Charadrius fulvus,* in Great Britain. In December last Mr. Bidwell, a gentleman who visits Leadenhall market regularly, to pick up specimens of rare birds and eggs at the game-dealers' shops, told me that he had seen an odd variety of the Golden Plover. I immediately went to the market, and found amongst a lot of Golden Plovers from Norfolk the specimen in question. It was badly damaged, and having been kept in the shop during mild weather for ten days, it had already become tainted, so that it was only with the greatest difficulty that it could be preserved; but I have succeeded in getting it made into a passable skin. It closely resembles examples of *Charadrius fulvus* from Asia, and has most of the feathers on the upper parts margined with yellow. It measures, culmen 1·1 inch, wing 6·0, tail 2·3, tarsus 1·6, middle toe and claw 1·05. I preserved the sternum, and gave it to Professor Newton, of Cambridge, soon after I procured the bird; but having been so closely occupied during the last few months, I have, up to the present time, omitted to place the occurrence of this rare European Plover on record.

I am, dear Sir,
Yours truly,
H. E. Dresser.

The Firs, South Norwood,
June 1875.

Sir,—Finding only, as far as I can discover, one well-authenticated instance of the Tufted Duck (*F. cristata*) breeding in Great Britain (Yarrell, 3rd ed. vol. iii. p. 354), it will, I am sure, interest many to know that last week I saw two fine broods, eight young birds in each, on Butterston Loch, one of the three lochs so well known in this neighbourhood. They were just newly hatched; and their diving was so incessant that it was some time before I could count them. For the last two seasons I have suspected them of breeding here, having seen the old birds late on in the summer. There are several other pairs of these Ducks on the loch now, and I have no doubt most of them are breeding. The lochs are, and most likely always will be, strictly preserved; so I have no hesitation in making known the breeding-place of one of our rarer summer visitors.

I remain, &c. &c.,
A. B. Brooke.

10th July, 1875.
Cardney, Dunkeld, N.B.

Dear Sir,—My late colleague, Mr. Sharpe, in his 'Catalogue of Accipitres,' amongst other alterations of well-known names, changes that of the Lesser Kestrel to *Cerchneis naumanni* (Fleisch.), on the authority of a footnote in Naumann's Naturg. Vög. Deutschl. i. p. 318, without having had an opportunity of consulting the original description by Fleischer, as is evident from his reference. When in Germany a short time ago, I came across the periodical referred to by Naumann; and having succeeded in securing the volume containing the article on the Lesser Kestrel, I therefore trust I may be permitted to make a few remarks on the subject. The periodical in question is a small 12mo popular almanack, intended for foresters and sportsmen, the title being as follows—'Sylvan, ein Jahrbuch für Forstmänner, Jäger und Jagdfreunde;' and the editors are C. P. Laurop and V. F. Fischer, both officers in the forest department of the Grand Duchy of Baden. It contains short biographies of well-known sportsmen, articles on sporting subjects, mixed anecdotes, short poems, and a few popular notes on animals likely to interest a forester. The article by Fleischer is one on Montagu's Harrier and the Lesser Kestrel, and is in the issue for 1817 and 1818 (pp. 173–176), which were published together late in 1818, or early in 1819; for I find that 'Sylvan' appeared somewhat irregularly, and in many instances two years' issue were published at the same time. The article in question is in the form of a letter, and though, as above stated, it was not published until 1818 or 1819, bears date "Leipzig, autumn 1817," Fleischer states that in a letter from Temminck he had heard of a new Hawk, which he proposed should be called *Falco naumanni*, in honour of Naumann, and which, he adds (p. 175), was "first discriminated by Natterer, of

Vienna, who called it *F. xanthonyx*, or the Yellow-clawed Falcon," but that, as the Red-legged Hobby has also yellow claws, he considers this name inappropriate. Fleischer then gives a few particulars as to the distinctive characters of the bird in question; but, as he possessed no specimen, he gives no formal description, and, unless one were aware that it is the same species that is described by Naumann, it would be scarcely possible to identify it by the particulars given by Fleischer. He adds (p. 176) that Naumann, who possessed specimens, would very shortly publish full descriptions and carefully executed figures of the species; and in a footnote he states that the new edition of Naumann was then (1817) in the press, and that the first volume would be issued in 1818, on the Jubilee (he trusted "der erste Band wird hoffentlich schon Jubilate 1818 die Presse verlassen"). This would tend to show that the first volume of Naumann's work and the 1817–1818 volume of 'Sylvan' were issued in the same year, or else the former preceded the latter; and it is quite evident from the footnote in Naumann's 'Naturg. Vög. Deutschl.' (p. 318), that when his work was issued the 1818 volume of 'Sylvan' had not appeared; for he leaves the page blank, his note being as follows:—"*Cenchris.* Émerillon roux. Der kleinste rothe Falke. Frisch, Vögel, t. 89. =Sylvan, v. Laurop und Fischer, Jahrg. 1818, S., unter dem Nahmen Falco naumanni von G. Fleischer." I further observe that this same Herr Fleischer, of Leipzig, was the publisher of Naumann's work; and it may therefore be taken for granted that he would have been able to fill in the page, had his article in 'Sylvan' already appeared in print: and, besides, his statement that the first volume of Naumann's work would appear in 1818 was most probably correct; for he, as the publisher, would be the most likely person to know this.

On looking through one of the later volumes of 'Sylvan,' I find it incidentally stated that in and previous to 1821, the first part, containing numbers 1–7, and the second part as far as the 4th number, of Naumann's work, had already been issued, which shows that, although the title-page of the complete volume i. bears date 1822, yet a large portion was issued in parts previous to that date; and I also observe that the introduction to this volume bears date September 1818, when, doubtless, the first portion of the work was issued.

Under these circumstances I am sure that most ornithologists, Mr. Sharpe amongst the rest, will agree with me that, as it is tolerably evident that Fleischer's and Naumann's articles were published about the same time, and it is impossible to say which was issued first, it is not advisable to adopt a name which has never been in use on such trivial grounds, and that Naumann's name, *cenchris*, should be retained, and that of *naumanni* discarded, for the Lesser Kestrel.

I remain,
Yours, &c.,
H. E. Dresser.

6 Tenterden Street, W.
14th August, 1875.

Northrepps, 4th September, 1875.

Sir,—Mr. Edward Fountaine, of Easton, in Norfolk, whose success in breeding the European Eagle-Owl in confinement was recorded in 'The Ibis' for 1859 (p. 273), and has been continued with very little intermission since that period, has more recently turned his attention to breeding the Snowy Owl under similar conditions.

A female Snowy Owl in Mr. Fountaine's aviary laid one egg in 1870, four in 1871, four in 1872, one in 1873, three in 1874, and five in 1875, forming a slight hollow in the ground in the corner of the aviary, which served her for a nest.

In 1872 she laid her first egg on the 1st June; but in each of the other five years she commenced laying on the 30th May.

On each occasion she was paired with the same male, except in 1873, when Mr. Fountaine tried the experiment of putting another male with her instead of her former mate; but he reinstated the latter in his previous position in the spring of 1874.

All the eggs thus produced proved infertile prior to 1874, in which year the three eggs were each found to contain a young bird, but were not hatched in consequence of the old female deserting them on the 2nd July, probably owing to the great heat then prevailing, and to the circumstance of her not being furnished with water, with which she was constantly supplied, and which she frequently used both for bathing and drinking, during her incubation of 1875.

Her first egg of the present year, which was laid on the 30th May, was successfully hatched on the 1st July; the second egg was hatched on the 3rd, the third on the 6th, the fourth on the 8th, and the fifth on the 9th; but in this last instance the young bird, unfortunately, died before its emergence from the egg was fully completed.

The young Owls, when first hatched, were covered with pure white down, and continued in that state for about the first fortnight; but the one hatched on the 8th July unfortunately died on the 14th.

On the 15th July Mr. Fountaine noticed that the down on the eldest of the young Owls was beginning to assume a dark lead-coloured tint; and by the 19th the three surviving Owlets had all changed from white to dark lead-colour, though in many of their plumelets the extreme tips still remain slightly white.

Mr. Fountaine left home on the 23rd July; and on his return, on the 3rd of August, he observed that the young Owls were beginning to show their quills and tail-feathers; but on the 4th the youngest of the three, in which these feathers had just become apparent, also died.

The remaining birds, the two eldest of the brood, have thriven well, and give promise of attaining a healthy maturity; I visited them on the 12th of August, at which date they were in a state of plumage much resembling the nestling specimen figured in Dresser's 'Birds of Europe.'

I am, &c.,
J. H. GURNEY.

Northrepps Hall, 17th Sept. 1875.

Sir,—Having recently had considerable experience of *Hirundo savigni* (Steph.) in Egypt, I am able to correct a mistake in 'The Ibis' for 1866, p. 423, and can now say positively that the Swallow shot at Teesmouth, in Durham, was not this bird, but only our common English species.

J. H. Gurney, Jun.

Dunipace House, Falkirk,
September 22nd.

Dear Sir,—In Mr. J. E. Harting's paper "On the Eggs of some little-known Limicolæ" (P. Z. S. 1874, p. 454), he describes and figures an egg of *Anarhynchus frontalis* (Quoy & Gaim.), which was taken, with two others, by Mr. J. R. Cook on the Otaio river-bed, Canterbury Settlement, New Zealand. I write now to add a note to those given by the collector, which, I think, cannot fail to be of interest to the readers of 'The Ibis.' Mr. J. R. Cook has lately been staying with me here, having returned from New Zealand for a time; and he told me that the three eggs of *Anarhynchus* already referred to were placed in the nest, or hollow in the sand, points downwards, and were almost entirely concealed by being covered with *sand* and lichen until only the large ends of the eggs were left exposed. The eggs were placed not with the small ends pointing towards one another, but absolutely in a perpendicular position; and of this he took particular note. In his notes sent to me along with the eggs, he had underlined the words "point downward." It would be interesting to know if this is a usual habit, or only an accidental occurrence.

Believe me, &c. &c.,
John A. Harvie Brown.

---

33 Carlyle Square, S.W.
22nd September, 1875.

Dear Sir,—I have just heard from Mr. Dresser, stating that my "*Turdus chrysopleurus*, figured in last year's 'Ibis,' is *Turdus pelios* of Bonap. Consp. Gen. Av." He says that Mr. Severtzoff pointed it out to him, and said that Dr. Taczanowski has a series of specimens from Dauria, where it is not very rare. Mr. Dresser referred to Bonaparte's description, and adds, "it agrees tolerably closely, and is, according to Severtzoff, a description of a young bird, of which Taczanowski has several."

However distressing it may be to have one's novelties knocked on the head, I shall be glad to learn what is the true *T. pelios*, Bonap. I will write at once to Dr. Taczanowski for a young specimen, and try and settle the matter at once. I half believe that the smallest form of *T. obscurus*, procured by myself at Chefoo, might turn out to be Bonaparte's doubtful species. I have a bird from Mr. Sharpe marked "Cameroons," Africa, and *T. pelios*; but this does not at all tally with the description in the 'Conspectus Avium'*.

Yours very truly,
ROBERT SWINHOE.

Letters dated Disco, 14th July, have been received from each of the naturalists, Captain Feilden and Mr. Hart, attached to the Arctic Expedition; and so far all was going on well, though both ships encountered bad weather on the voyage to Greenland. Of course it was not to be expected that any ornithological wonders should be met with, or discoveries made, on the way to a place so often visited. Captain Feilden, writing to Professor Newton, says that the subject of the dark, or "blue," variety of *Fulmarus glacialis* requires a deal of investigation, but at Disco no specimen of the blue form was noticed. He had seen on the wing, near Laxebugt, an example of *Uria grylle* without any white feathers, and apparently of a uniform black. Such an example was long ago mentioned by Holböll as having been seen by him; and we trust that sooner or later one may be obtained; for it would be curious to know wherein it may differ from *U. carbo*. Mr. Hart says that only one specimen of *Calidris arenaria* had been observed—a fact which does not look as if this species commonly bred in the settled parts of Greenland. We trust that our friends may find it so employed further to the northward, whither the ships were seen proceeding by the 'Valorous,' which brought home these tidings.

---

* [*Cf.* Cab. J. f. Orn. 1870, p. 238, where the difference between the Central-Asiatic and African birds is pointed out, and the latter called *T. icterorhynchus*, Pr. Würt.; also Ibis, 1871, p. 424.—ED.]

Mr. Dresser has in preparation a reprint of Eversmann's 'Addenda ad Zoographiam Rosso-Asiaticam.' The great rarity of the three fasciculi of this tract is doubtless known to most of our readers, the whole stock of copies having been burnt soon after their publication. It is now two years since Mr. Dresser first began to make inquiries for the different portions of the work; and only recently has he succeeded in finding and procuring from different quarters the loan of all three parts, when he at once placed them in the hands of the printers. Only within the last few weeks we found a complete set in a volume of tracts belonging to the library of the late Hugh E. Strickland, and recently presented by Mrs. Strickland to the University of Cambridge. This is the only complete copy we know of in any library. Intending subscribers to Mr. Dresser's reprint are requested to send their names to him at 6 Tenterden Street, Hanover Square.

At a meeting of the Norfolk and Norwich Naturalists' Society, ou the 28th of September, Mr. Southwell announced the interesting discovery of *ten* letters, which he exhibited, written by Gilbert White, of Selborne, to Robert Marsham, of Stratten-Strawless, in Norfolk, of whose great-grandson they, having never before been out of the possession of the family, are now the property. The first of these letters, a copy of which we have been permitted to see, bears date 13th August, 1790, and the last 15th June, 1793, only a few days before the writer's death. To ornithologists the most curious fact which they reveal is the occurrence in Norfolk of an example of *Tichodroma muraria*—the unmistakable description of which is written by Marsham on the back of one of the letters, and seems to have been at once recognized by White. According to the evidence collected by Messrs. Sharpe and

Dresser (B. Eur. pt. viii.), this species has appeared as far to the northward as Rocroy and Osnabrück; but that a bird of its habits should ever cross "the silver streak" could hardly have been expected, though, as is well known, *Accentor collaris* has several times favoured England with a visit, and perhaps other distinguished members of the Alpine Club may have come and gone unseen. It must be a satisfaction, we think, to Prof. Newton, that he has done with the Certhiidæ in his revised edition of Yarrell's work, and therefore will not have to take into consideration the claims of the Wall-creeper to be accounted a "British" bird; but in our humble opinion eighty years and more of non-user ought to bar any rights an exotic species may fancy itself to possess; and if they are to be enforced in this case, the sooner *Tichodroma* puts in an appearance, the better its chances of recognition*. Another interesting fact which these letters mention is that White was employed on a monograph of *Caprimulgus europæus,* as a sequel to those charming dissertations on British species of *Hirundo* and *Cypselus* which were printed in the 'Philosophical Transactions.' Whether this monograph was ever completed we may expect to hear from Prof. Bell, when he brings out, as we are assured he shortly will, his long-looked-for edition of the 'Natural History of Selborne.'

XLIX.—*Obituary.*

Sir William Jardine, whose death took place on the 21st Nov. of last year, belonged to a generation of ornithologists of whem but few now remain. When we consider that much of his work was done before the Zoological Society was organized, and before the 'Annals and Magazine of Natural

---

* It is worthy of remark that Willughby states of this species, "They say it is found in England; but we have not as yet had the hap to meet with it." Who the "*they*" are is doubtful, Merrett being apparently the only author who includes it as British (Pinax, 1667, p. 177), and this without remark.

History' took its present form, some idea can be formed of the extent of his personal knowledge of the development of our science during half a century. Sir William Jardine during his life, contributed largely to ornithological literature, both as author and editor. One of his earliest works, 'Illustrations of Ornithology,' undertaken with the late P. J. Selby, was commenced in 1825, and completed in four volumes in 1843. 'The Naturalist's Library,' a useful publication, to which Swainson contributed several volumes, others being from Sir W. Jardine's own pen, was commenced in 1833, and continued during the following ten years. With Selby and Johnston, he edited the 'Magazine of Zoology and Botany,' which, after the publication of the second volume, was merged into the 'Annals of Natural History.' He also edited two editions of White's 'History of Selborne,' and one of Wilson's 'American Ornithology,' supplying notes to both works. Several papers were also written by him in the 'Contributions to Ornithology,' of which he was the editor. In 1855 Sir W. Jardine assisted his daughter, Mrs. Strickland, in compiling the memoir of the late H. E. Strickland, and also in editing the first volume of 'Ornithological Synonyms,' from Strickland's MS. This was his latest work; for though he retained his interest in his collections and library to the last, he did not take the same active share in furthering the study of ornithology as formerly. During the later years of his life, however, he prepared a catalogue of his collection of birds; and this was on the point of completion and in the printer's hands at the time of his death. Though ornithology was Sir William Jardine's favourite study, he interested himself in other branches of natural science, several of which he took an active part in advancing. He was one of the original founders of the Berwickshire Naturalists' Club, the first of its kind established in this country; he also took a principal share in the discussions which led to the foundation of the Ray Society. He was a Fellow of the Royal Societies, both of London and Edinburgh, and also of many other Societies, both in England and Scotland.

Carl J. Sundevall, a Foreign Member of our Union, whose death took place in the present year, long occupied a distinguished place amongst ornithologists of the present time. For nearly forty-five years his name has been constantly before the world in connexion with this subject, as well as others, in which he was almost equally eminent. Systematic ornithology owes much to Sundevall's industry; and his two chief works on this subject, published, the one in 1835, the other in 1873, have largely influenced the systems of other workers. Indeed the 'Methodi naturalis Avium disponendarum Tentamen,' will long serve as a mine of wealth to future systematists, from which characters of greater or less importance in bird-classification can be derived. Sundevall, like many others of his day, based his systems of classification upon external characters alone; and for this reason his conclusions, in many cases, have been very properly called in question when the characters of the higher groups of birds have been discussed. The belief, we are glad to say, is constantly gaining ground, that no arrangement can be considered satisfactory until the whole organism of birds has been investigated, and the distinctive characters found brought forward to show the relationship between different groups. This, however, is no reason why work like Sundevall's should be laid aside as of no use. Its true value is to be found by using in a different sense the characters shown in his pages to exist.

Other work of Sundevall's is also of high merit. His List of the Birds of Calcutta shows how well he employed a short visit to that district of India, and how ably he worked up his materials at home. Besides his journey to India, he undertook another to northern regions, when he accompanied the French "Expédition du Nord," which sailed more than thirty-five years ago under the direction of Gaimard. To the Zoology of this expedition Sundevall largely contributed.

Though thus occupied in studying the birds of various parts of the globe, the ornithology of his native land, Sweden, was by no means neglected; and 'Svenska Foglarna,' a work incomplete at the time of his death, bears the characteristics of

Sundevall's clear and comprehensive style. We believe that the MS. of this book has long been finished, and that the fault of its slow issue from the press rests with the publisher.

We cannot here give any thing like a *résumé* of all the papers published by Sundevall during his long career; but we cannot omit to mention his 'Conspectus Avium Picinarum,' which we look upon as quite one of the best works in the whole of ornithological literature. It is a masterpiece of conciseness and clearness, in consulting which, we do not hesitate to say that more light is to be derived than from Malherbe's ponderous illustrated volumes, which it supplements and explains.

Sundevall was Director of the Museum of Stockholm, the building of which was reconstructed under his superintendence. The arrangement of the contents of this museum was elaborated with great care under his eye.

John Edward Gray, so well known for his many works on various subjects of natural history, and for his long connexion with the British Museum as keeper of the zoological department, was the author, during the early part of his career, of several works on ornithological subjects. The chief of these, 'Indian Zoology,' was intended to make public the large collection of drawings formed by the late Major-General Hardwicke; but after about 180 of these drawings had been published, the work was discontinued. Other papers of his are to be found in the 'Zoological Miscellany,' of which he was the editor. Since then nothing relating to ornithology seems to have been written by Dr. Gray, he having turned his attention to other subjects, and left the study of birds to his brother, George Robert Gray, who predeceased him in 1872. Dr. Gray died on the 7th of March 1875, having just completed his 75th year.

INDEX.

Abrornis armandi, 144.
Acanthis bella, 242.
—— cannabina, 242.
—— flavirostris, 242.
—— linaria, 242.
Acanthylis gigantea, 280.
Accentor collaris, 177, 307, 471.
—— modularis, 307.
Accipiter badius, 104, 480.
—— bicolor, 469.
—— cenchroides, 104, 480.
—— chilensis, 469.
—— chionogaster, 475, 476, 477.
—— cirrhocephalus, 468, 475.
—— cooperi, 469, 470, 500.
—— erythrauchen, 468, 475.
—— erythrocnemis, 475, 476, 477.
—— erythropus, 471, 472.
—— francesi, 358.
—— fuscus, 470, 475.
—— gularis, 481, 482.
—— gundlachi, 469, 500.
—— guttatus, 469.
—— hartlaubi, 471, 472.
—— korschun, 503.
—— lantzii, 468, 484.
—— madagascariensis, 468, 484.
—— major, 104
—— melanoleucus, 473.
—— melanoschistos, 479.
—— mexicanus, 470.
—— minullus, 65, 468, 471, 472, 473.
—— nigroplumbeus, 478.
—— nisus, 104, 296, 366, 448, 471, 475, 477.
Accipiter ovampensis, 367, 468, 478.
—— pectoralis, 469.
—— pileatus, 469, 499.
—— rhodogaster, 471, 484.
—— rubricollis, 475.
—— rufiventris, 478.
—— sphenurus, 507.
—— stevensoni, 482, 483.
—— sulaensis, 484.
—— tachiro, 65.
—— tinus, 471, 472.
—— ventralis, 475, 477, 478.
—— virgatus, 276, 468, 471, 481, 483.
Acredula caudata, 180, 303.
—— rosea, 304.
Acridotheres albocinctus, 251.
—— cristatellus, 119.
—— mahrattensis, 322.
—— siamensis, 463.
—— sinensis, 351.
—— tristis, 275.
Acrocephalus aquaticus, 179, 309.
—— arundinaceus, 72, 309.
—— brunnescens, 396.
—— certhiola, 179.
—— dumetorum, 275.
—— fluviatilis, 309.
—— locustella, 309.
—— luscinioides, 309.
—— nævius, 309.
—— palustris, 72.
—— schœnobænus, 309.
—— stentorius, 396, 412.
—— streperus, 309.
Actitis hypoleuca, 86, 276.
Actiturus bartramius, 6, 22.
Aedon galactodes, 61, 179.
Ægialitis bicincta, 453.
—— cantiana, 26, 401, 402, 452.
—— curonica, 185.
—— dubia, 452.
—— geoffroyi, 400, 412.
—— hiaticula, 85.
—— indica, 382.
—— marginata, 85.
—— minor, 21.
—— mongolica, 401.
—— philippensis, 452.
—— placida, 129, 452.
—— ruficapilla, 453.
—— sanctæ-helenæ, 59, 85.
—— tricollaris, 60, 85, 382.
Ægithalus castaneus, 268.
—— pendulinus, 268, 303.
Ægolius brachyotus, 111.
—— otus, 112.
Æsacus curvirostris, 401.
Æthopyga dabrii, 463.
Aglaia chapoul, 465.
Agrilorhinus bonapartii, 214.
—— humeralis, 215.
—— olivaceus, 216.
—— personatus, 218.
—— sittaceus, 204, 207.
Agyrtria media, 163, 165.
—— meliphila, 163, 165.
—— phœbe, 163.
Aix galericulata, 137, 457.
Ailurœdus arfakianus, 148.
—— smithi, 378.
Alauda arborea, 311.
—— arvensis, 311.
—— brachydactyla, 122.
—— calandra, 181.
—— cantarella, 122.
—— cristata, 311.
—— galgula, 274, 399.
—— pispoletta, 122.

Alauda tartarica, 181.
Alca torda, 11, 186.
Alcedo asiatica, 461.
—— beavani, 461.
—— bengalensis, 275.
—— ispida, 16, 184, 300.
—— meningting, 462.
—— rufigastra, 461.
Alcippe nigrifrons, 275.
Alseonax latirostris, 275.
Aluco flammeus, 296.
—— punctata, 66.
Amadina optata, 447.
Amblyura cyanovirens, 441.
Ampelus garrulus, 180, 302.
Amydrus bicolor, 63, 78.
—— morio, 63, 64, 78.
Anæretes fernandezianus, 376.
Analcippus trailli, 349.
Anarhynchus frontalis, 519.
Anas acuta, 5, 427.
—— boschas, 16, 26, 427.
—— cana, 430.
—— circia, 427.
—— clypeata, 5, 16, 142.
—— crecca, 5, 427.
—— marmorata, 430.
—— penelope, 427.
—— pœcilorhyncha, 407.
—— querquedula, 430.
—— strepera, 16, 427.
Anastomus oscitans, 404.
Andropadus importunus, 75.
Anser albifrons, 426, 456.
—— brachyrhynchus, 456.
—— brenta, 426.
—— erythropus, 456.
—— ferus, 426.
—— segetum, 426, 456.
Anserella coromandeliana, 407.
Antenor harrisi, 234.
Anthochæra senex, 147.
Anthus, sp.? 10.
—— aquaticus, 449.
—— arboreus, 141.
—— campestris, 141, 181, 311.
—— cervinus, 21, 173, 181, 310, 449.
—— correndera, 331.
—— japonicus, 449.
—— littoralis, 311.
—— ludovicianus, 181.
—— pratensis, 310.
Anthus pyrrhonotus, 73.
—— richardi, 173, 181, 311.
—— rupestris, 181.
—— spipoletta, 181, 310, 311.
—— trivialis, 310.
Apalis thoracica, 71.
Aplonis brevirostris, 440.
Aptenodytes catarractes, 113.
—— papua, 112, 113.
Apteryx australis, 261, 394.
—— haasti, 261.
—— oweni, 261, 394.
Aquila adalberti, 2.
—— albipectus, 101.
—— bifasciata, 101.
—— bonellii, 35.
—— chrysaetus, 100, 175, 294.
—— clanga, 101, 294.
—— culleni, 508.
—— fulva, 99,
—— hastata, 199, 200, 201, 203.
—— heliaca, 100, 294, 508.
—— imperialis, 100.
—— intermedia, 100.
—— minuta, 101, 102.
—— mogilnik, 2.
—— nævia, 200, 201, 203, 294.
—— nævioides, 508.
—— nipalensis, 101.
—— nobilis, 99.
—— orientalis, 101.
—— pennata, 101, 294.
—— rapax, 7.
Arachnechthra asiatica, 275, 286, 315.
—— lotenia, 275.
Arachnophila simplex, 264.
Arborophila brunneipectus, 459.
Archibuteo lagopus, 103.
Ardea alba, 424.
—— cinerea, 10, 15, 86, 132, 403, 424.
—— garzetta, 425.
—— purpurea, 15, 142, 403, 424.
Ardeola grayi, 276.
Ardetta cinnamomea, 404.
—— eurhythma, 132, 455.
—— flavicollis, 404.
—— minuta, 425.
—— podiceps, 63, 86.
Ardetta sinensis, 404.
Asio accipitrinus, 111, 176, 298, 502.
—— asio, 325.
—— brachyotus, 377.
—— bubo, 325, 326.
—— capensis, 502.
—— otus, 66, 112, 298, 325, 326, 327.
—— scandiaca, 325, 326.
—— scops, 325.
Astur approximans, 365, 468.
—— atricapillus, 353, 354.
—— brevipes, 104, 105, 106.
—— castanilius, 364.
—— cenchroides, 104, 105, 106.
—— cuculoides, 365.
—— dussumieri, 105.
—— griseigularis, 468.
—— hensti, 353, 468.
—— macroscelides, 363, 364.
—— macrurus, 234.
—— nisus, 104.
—— palumbarius, 104, 295, 353, 473.
—— pectoralis, 356.
—— polyzonoides, 468.
—— soloensis, 365.
—— striatulus, 354.
—— tachiro, 468.
—— tibialis, 362.
—— trinotatus, 364.
—— trivirgatus, 468.
Asturina magnirostris, 330.
Athene ferruginea, 330.
—— meridionalis, 110.
—— minutissima, 330.
—— nudipes, 110.
—— orientalis, 110.

Batis molitor, 75.
Batrachostomus hodgsoni, 459.
Baza verreauxi, 66.
Bhringa remifer, 463.
Bonasa betulina, 417.
Botaurus minutus, 185.
—— stellaris, 15, 132, 425, 455.
Brachypodius criniger, 264.
Brachypternus ceylonus, 284, 410.
Brachypteryx cruralis, 352.

Brachyrhamphus kittlitzi, 458.
—— marmoratus, 458.
Branta rufina, 16, 26.
Bubo ascalaphus, 326.
—— coromandus, 250.
—— ignavus, 111, 298, 327.
—— maximus, 111.
—— sinensis, 255.
—— turcomanus, 111.
Bucco radiatus, 330.
Buchanga atra, 317, 463.
—— cærulescens, 274, 288.
—— intermedia, 463.
—— leucopygialis, 288.
Budytes cinereocapilla, 142, 310.
—— flavus, 20, 142.
—— melanocephalus, 20.
—— viridis, 398.
Buphaga erythrorhyncha, 77.
Buphagus comatus, 425.
Buphus coromandus, 276.
Butalis adusta, 75.
—— latirostris, 117.
—— sibirica, 117.
Butastur liviventer, 463.
Buteo abbreviatus, 500.
—— borealis, 372.
—— brachyurus, 500.
—— erythronotus, 371.
—— exsul, 371, 377.
—— ferox, 103.
—— jackal, 64, 65.
—— lagopus, 175, 295.
—— leucurus, 103.
—— minutus, 500.
—— nigricans, 103.
—— pennsylvanicus, 500.
—— rufinus, 103.
—— swainsoni, 372, 377, 500.
—— vulgaris, 103, 175, 295, 500.
Butorides javanica, 404.

Caccabis chukar, 126.
—— græca, 9, 10.
—— petrosa, 5, 8, 9, 10, 35.
—— rufa, 5, 8, 9, 10.
—— saxatilis, 8, 9, 13, 35.
Cacatua galerita, 438.
Calamodyta aquatica, 17.
—— arundinacea, 17.
—— bistrigiceps, 144.
—— luscinoides, 17.
—— maacki, 144.
Calamodyta melanopogon, 17.
—— phragmitis, 17.
Calandrella bætica, 2.
—— brachydactyla, 141, 182.
Calidris arenaria, 60, 86, 424, 455, 520.
Calliparæa phœnicotis, 466.
Calliste bourcieri, 464, 465.
—— phœnicotis, 464, 466.
—— ruficervix, 497.
Callolophus puniceus, 264.
Callospiza calliparæa, 464.
Calornis affinis, 461.
—— cantor, 461.
—— insidiator, 461.
—— irwini, 461.
—— tytleri, 461.
Campephaga cæsia, 76.
—— niger, 76.
—— sykesi, 275.
Campylops humulus, 207.
Campylorhynchus brevipennis, 331.
Caprimulgus accræ, 379.
—— ægyptius, 491.
—— arenicolor, 491.
—— asiaticus, 281.
—— borneensis, 264.
—— europæus, 67, 300.
—— fulviventris, 379.
—— indicus, 313.
—— isabellinus, 491.
—— jotaka, 448.
—— kelaarti, 314.
—— natalensis, 379.
—— spilocercus, 281.
Carbo desmaresti, 27.
Carduelis caniceps, 387.
—— elegans, 243, 265.
—— europæus, 243.
—— orientalis, 243, 387.
Carine bactriana, 258.
—— brama, 258.
—— glaux, 110, 111, 258.
—— noctua, 297.
—— plumipes, 258.
—— pulchra, 258.
—— spilogaster, 258.
Carpodacus erythrurus, 245, 352, 414.
—— rhodochlamys, 245.
—— roseus, 121, 183.
—— rubicillus, 245.
Carpophaga ænea, 399.
—— castaneiceps, 442.
—— pacifica, 442, 443.
Casarca rutila, 137.
Catriscus apicalis, 71.
Cecropis striolata, 351.
Centropus chlororhynchus, 275.
—— rufipennis, 275, 315.
—— superciliosus, 82.
Cephalopterus ornatus, 331.
Cerchneis cenchris, 108.
—— naumanni, 255, 515.
—— tinnunculus, 108, 255.
Certhia hodgsoni, 145.
—— familiaris, 145, 304.
—— fasciata, 145.
Ceryle guttata, 449.
—— lugubris, 449.
—— maxima, 69.
—— rudis, 62, 69, 282.
Ceuthmochares australis, 82.
Chætura caudacuta, 448.
—— zonaris, 330.
Chalcopelia brehmeri, 467.
—— puella, 467.
Chalcophaps indica, 400.
Chalybura isauræ, 266.
—— urochrysea, 266.
Charadrius cantianus, 419.
—— curonicus, 419.
—— fulvus, 400, 452, 513.
—— hiaticula, 419.
—— longipes, 184.
—— morinellus, 419.
—— virginicus, 184, 452.
Chelidon blakistoni, 448.
—— urbica, 301.
Chlorestes phaeton, 165.
Chlorochrysa calliparia, 465.
—— nitidissima, 464, 466.
—— phœnicotis, 466.
Chlorœnas albilinea, 331.
Chlorolampis auriceps, 168.
—— caniveti, 168.
—— chrysogaster, 153, 154, 158, 161.
—— osberti, 168.
—— salvini, 168, 169.
Chlorospingus flavigularis, 384.
—— nigrifrons, 384.
—— speculiferus, 383.
—— superciliaris, 384.
Chlorospiza chloris, 241.
—— sinica, 120.

Chlorostilbon acuticaudus, 171.
—— angustipennis, 150, 151, 153, 157, 158, 163, 167,
—— assimilis, 154.
—— atala, 150, 151, 159, 160.
—— aureiventris, 165, 167.
—— auriceps, 150, 151, 168, 169.
—— bicolor, 165.
—— brevicaudatus, 163, 164.
—— caniveti, 150, 151, 168, 169.
—— caribæus, 159, 160.
—— euchloris, 150.
—— hæberlini, 150, 151, 160, 161.
—— igneus, 161, 162.
—— melanorhynchus, 153, 155.
—— napensis, 163, 164.
—— nitens, 160.
—— osberti, 168, 169.
—— peruanus, 163, 164, 165.
—— phaethon, 165.
—— poortmanni, 170.
—— prasinus, 150, 151, 159, 161, 162, 163, 165.
—— pucherani, 150, 151, 161, 162.
—— pumilus, 153, 154.
—— smaragdina, 153, 158.
—— splendidus, 150, 151, 162, 165, 167.
Chotorea mystacophonus, 264.
Chrysocolaptes æstivus, 283.
—— stricklandi, 273, 283, 410.
Chrysœna victor, 435.
Chrysomitris spinus, 120.
Chrysophlegma chlorophanes, 283.
Ciconia alba, 425.
—— episcopus, 403.
—— nigra, 425.
Cinclodes fuscus, 370, 376.
Cinclus albicollis, 140.
—— aquaticus, 140, 177, 304.
—— pallasi, 449.
Circaetus brachydactylus, 102.
—— gallicus, 35, 102, 293.
—— orientalis, 102.
Circus æruginosus, 109, 223, 278, 296, 351.
—— assimilis, 225.
—— cineraceus, 176, 278, 296, 351, 503.
—— cinerarius, 110.
—— cyanus, 105, 109, 222, 296, 448.
—— gouldi, 225.
—— hudsonicus, 222.
—— jardinii, 225.
—— macropterus, 372, 377.
—— macroscelis, 230, 231, 253, 254.
—— macrurus, 65.
—— maillardi, 228, 229, 230, 232, 256, 351.
—— melanoleucus, 222, 225, 226, 227, 228.
—— pygargus, 222, 503.
—— ranivorus, 65, 223.
—— rufus, 109.
—— spilonotus, 225, 227, 228.
—— swainsoni, 65, 109, 176, 223, 278, 296.
—— wolfi, 225,
Cisticola schœnicola, 17, 25, 275.
Coccothraustes carneipes, 241.
—— japonicus, 121.
—— speculigerus, 241.
—— vulgaris, 5, 414,
Cocystes jaccobinus, 284, 315.
Colius striatus, 62, 81.
Collocalia francia, 313.
—— fucifaga, 275.
—— spodiopygia, 437.
Columba castaneiceps, 447.
—— intermedia, 400.
—— œnas, 10, 416.
—— palumbus, 184, 416, 430.
—— rupestris, 125.
—— turtur, 416.
—— vitiensis, 442.
Colymbus arcticus, 433, 456.
—— glacialis, 433.
—— septentrionalis, 433, 456.
Copsychus saularis, 275, 396.
Coracias garrula, 68, 300.
—— indica, 314.
Coriphilus fringillaceus, 436, 441.
Corvultur albicollis, 62, 77.
Corvus collaris, 415.
—— corax, 35, 236, 272, 415.
—— cornix, 16, 26, 237, 415.
—— corone, 236, 237, 415.
—— culminatus, 236, 398.
—— frugilegus, 10, 415.
—— hybrida, 237.
—— monedula, 237, 415.
—— splendens, 398.
—— subcorax, 236.
—— torquatus, 119.
—— umbrinus, 236.
Corydalla richardi, 398.
—— rufula, 275.
Corythaix musophaga, 81.
—— porphyriolophus, 82.
Corythornis cyanostigma, 68.
Cosmetira eques, 147.
Cossypha caffra, 60, 61, 73.
—— natalensis, 73.
Coturnicops exquisita, 135.
—— noveboracensis, 135.
Coturnix communis, 13.
—— japonica, 452.
—— japonicus, 126.
Cotyle fulvigula, 68.
—— paludicola, 68.
—— riparia, 16, 68.
—— rupestris, 17.
Crex bailloni, 186.
—— minuta, 418.
—— porzana, 186, 418.
—— pratensis, 141, 186, 418.
—— pusilla, 186.
—— pygmæa, 418.
Criniger flaviventris, 74.
—— ictericus, 396.
Crinis calosoma, 266.
Crithagra butyracea, 80.
—— chrysopyga, 80.
—— sulphurata, 80.
Crypsirhina varians, 463.
Cuculus canorinus, 451.
—— canorus, 125, 299, 350.

Cuculus cupreus, 83.
—— klassi, 83.
—— smaragdineus, 83.
—— sonnerati, 284.
Cuncuma leucogastra, 278, 406.
Cursorius gallicus, 142, 502.
Cutia nipalensis, 352, 459.
Cyanecula suecica, 341.
—— wolfi, 306, 342.
Cyanoderma erythroptera, 264.
—— melanothorax. 264.
Cyanopolius cooki, 118.
—— cyanus, 117.
—— melanocephalus, 118.
Cyanoptila cyanolæma, 146.
Cygnus musicus, 426, 456.
—— olor, 426.
Cypselus affinis, 67, 280.
—— apus, 20, 24, 67, 301.
—— batassiensis, 275.
—— caffer, 67.
—— melba, 20, 67, 184, 301.

Dacelo gigantea, 437.
Daption capensis, 372, 377.
Daulias hafizi, 338.
—— luscinia, 306.
—— philomela, 306, 338.
Dendrochelidon coronata, 275.
—— mystacea, 147.
Dendrocygna javanica, 407.
Dendrœca virens, 180.
Dendrophila frontalis, 286, 316, 463.
Dendrotypes analis, 463.
Dialia adorabilis, 511.
Dicæum concolor, 316.
—— minimum, 275.
—— nigrimentum, 264.
Dicrurus ludwigi, 75.
—— musicus, 75.
Didunculus strigirostris, 446.
Diglossa albilateralis, 207, 216, 220.
—— aterrima, 207, 216, 220.
—— baritula, 204, 205, 206, 207, 208, 220.
Diglosa brunneiventris, 207, 211, 212, 220.
—— carbonaria, 206, 207, 213, 214, 229.
—— cyanea, 218.
—— d'orbignii, 209.
—— gloriosa, 207, 210, 220.
—— humeralis, 207, 215, 216.
—— hyperythra, 209.
—— indigotica, 207, 218, 220.
—— intermedia, 214.
—— lafresnayi, 206, 207, 214, 216, 220.
—— major, 207, 214, 220.
—— melanopis, 218.
—— mystacalis, 206, 207, 212, 220.
—— mystacea, 210.
—— pectoralis, 207, 212, 220.
—— personata, 206, 207, 218, 219, 220.
—— plumbea, 205, 207, 217, 220.
—— similis, 209, 210.
—— sittoides, 207, 208, 209, 210, 213, 214, 220.
Diglossopis cærulescens, 219, 220.
Diomedea derogata, 140.
Diphlogæna hesperus, 266.
Dissemurus lophorhinus, 289.
—— malabaricus, 273, 288.
Domicella cyanauchen, 147.
—— cyanogenys, 147.
—— fuscata, 147.
—— jobiensis, 147.
—— lori, 147.
—— scintillata, 147.
Doryfera euphrosinæ, 266.
—— ludoviciæ, 266.
—— veraguensis, 266.
Dromolæa leucocephala, 140.
—— leucopygia, 140.
Drymocataphus fuscicapillus, 273, 395, 410.
Drymœca curvirostris, 380, 381.
—— fortirostris, 380, 381.
Drymœca maculosa, 60, 70.
—— natalensis, 380, 381.
—— smithi, 71.
—— subruficapilla, 70, 71.
Drymoipus inornatus, 322, 396.
—— jerdoni, 397.
—— validus, 397.
Dryoscopus boulboul, 77.
—— cubla, 76.
—— martius, 299, 451.
Ducula badia, 459.
—— griseicapilla, 459.
—— insignis, 459.
Dumetia albogularis, 290.

Eclectus rodericanus, 343.
Egretta garzetta, 15.
—— modesta, 132.
Elanus cæruleus, 66, 279, 293.
Emberiza aureola, 6, 182, 250.
—— cæsia, 6, 182, 248.
—— caniceps, 248.
—— castaneiceps, 144.
—— chrysophrys, 122.
—— cia, 144, 247, 312.
—— cioides, 144, 247.
—— ciopsis, 144.
—— cirlus, 183, 312.
—— citrinella, 248, 312.
—— fucata, 121.
—— giglioli, 144.
—— hortulana, 183, 248.
—— lapponica, 182.
—— lesbia, 6.
—— leucocephala, 248.
—— luteola, 249.
—— melanocephala, 183.
—— melanops, 450.
—— miliaria, 249, 312.
—— minor, 249.
—— nivalis, 182.
—— pallasi, 249.
—— personata, 450.
—— pityornis, 6, 248.
—— polaris, 249.
—— pusilla, 6, 182, 249, 351.
—— pyrrhuloides, 249, 312.
—— quinquelineata, 146.
—— rufibarba, 248.
—— rustica, 182.
—— schœniclus, 248, 249, 312.

Emberiza spodocephala, 122, 450.
—— stewarti, 248.
—— tristrami, 122.
Empidonax hammondi, 387.
—— nanus, 386.
Empidothera cinereocapilla, 317.
Eophona melanura, 121.
—— personata, 121, 146.
Ephialtes backamuna, 279.
—— scops, 111.
Erismatura leucocephala, 427.
—— mersa, 16.
Erithacus rubecula, 306, 342.
Erythropus amurensis, 350.
—— vespertinus, 109, 412.
Erythrospiza githaginea, 245.
—— incarnata, 245.
—— obsoleta, 247.
—— phœnicoptera, 247.
—— sanguinea, 247.
—— trinotata, 364, 365.
Erythrosterna albicilla, 117.
—— maculata, 318.
—— parva, 6.
Erythrura cyanovirens, 441.
Estrelda amandava, 322.
—— astrild, 59, 79, 80.
—— incana, 80.
Eudromias asiaticus, 185.
—— morinellus, 184.
Eudynamys honorata, 142, 275.
—— taitensis, 437.
Eudyptes atrata, 114.
—— chrysocome, 113.
—— pachyrhynchus, 113, 114.
—— vittata, 112, 114.
Eulabes ptilogenys, 410.
Eumyias albicaudata, 318.
—— sordida, 273, 411.
Eunetta formosa, 137.
Euplectes taha, 79.
Eupodotis afra, 63, 85.
Eupsychortyx parvicristatus, 331.
Eurynorhynchus pygmæus, 455.
Euspiza americana, 331.
—— aureola, 250, 451.
—— brunneiceps, 249.
—— rutila, 121.
—— sulphurata, 451.
—— variabilis, 450.
Eustephanus fernandensis, 371, 377.
—— galeritus, 377.
—— leyboldi, 370, 371, 377.

Falcinellus igneus, 404.
Falco æsalon, 107, 108, 292.
—— alaudarius, 107.
—— amurensis, 448.
—— babylonicus, 106.
—— barbarus, 28, 32, 255.
—— cenchris, 20, 104, 175, 292, 517.
—— eleonoræ, 6, 22, 28, 29, 30, 32, 34, 508.
—— gabar, 236.
—— gyrfalco, 175.
—— lanarius, 107, 291, 292.
—— leucauchen, 232.
—— naumanni, 515.
—— peregrinoides, 107, 292.
—— peregrinus, 32, 107, 292.
—— poliogaster, 357.
—— pygargus, 503.
—— radiatus, 364.
—— rufescens, 255.
—— ruficeps, 448.
—— sacer, 106, 291, 292, 473, 508.
—— subbuteo, 108, 292, 448.
—— tinnunculus, 10, 293.
—— tscherniaievi, 106.
—— unicinctus, 234.
—— vespertinus, 175, 292.
—— xanthothorax, 232.
—— xanthonyx, 516.
Francolinus afer, 61, 84.
—— capensis, 62, 85.
—— sinensis, 350.
—— subtorquatus, 85.
—— vulgaris, 6.
Fregilus graculus, 119, 237.
Fringilla cannabina, 413.
—— carduelis, 10, 413.
—— chloris, 10, 413.
Fringilla cœlebs, 10, 242, 412.
—— montifringilla, 120, 183, 241, 413.
—— rufescens, 413.
—— serinus, 183, 413.
—— spinus, 413.
Fringillaria capensis, 61, 80.
—— flaviventris, 81.
Fulica atra, 15, 18, 134, 186, 418.
Fuligula cristata, 429, 514.
—— ferina, 5, 429.
—— marila, 429.
—— nyroca, 16, 429.
—— rufina, 429.
Fulix baeri, 457.
—— marila, 457.
—— mariloides, 457.
Fulmarus glacialis, 188, 520.

Galeoscoptes carolinensis, 177.
Galerida abyssinica, 141.
Galerita cristata, 10, 123, 141.
Gallicrex cristata, 134.
Gallinago aucklandica, 392.
—— australis, 453.
—— horsfieldi, 131.
—— major, 23, 185, 454.
—— megala, 131, 454.
—— nobilis, 332.
—— pusilla, 392.
—— scolopacina, 453.
—— stenura, 454.
—— wilsoni, 454.
Gallinula chloropus, 16, 26, 134, 186, 418.
—— phœnicura, 276, 323.
Galloperdix bicalcarata, 400.
Gallus stanleyi, 400.
Gampsorhynchus rufulus, 460.
—— torquatus, 349, 352, 460.
Garrulus brandti, 450.
—— glandarius, 16, 416.
—— leucotis, 349, 350.
—— sinensis, 119.
Gecinus awokera, 451.
—— canus, 124, 299, 451.
—— erythropygius, 148, 463.
—— guerini, 124.

Gecinus nigrigenis, 124.
—— striolatus, 412.
—— tancolo, 124.
—— viridis, 299, 451.
Gelochelidon anglica, 407, 408.
Geocichla cyanotus, 319.
—— layardi, 398.
Geopelia tranquilla, 59.
Geranospizias cærulescens, 233, 234.
—— gracilis, 233.
—— niger, 233, 234.
Glareola lactea, 400, 401, 412.
—— pratincola, 419.
Glaucidium brodiei, 259.
—— californicum, 36, 38, 39.
—— capense, 259.
—— castanonotum. 259.
—— castanopterum, 259.
—— cobanense, 259, 260.
—— cuculoides, 259.
—— ferox, 37, 45, 55, 57, 259.
—— ferrugineum, 36, 37, 42, 45, 46, 47, 49, 50, 52, 54.
—— gnoma, 36, 37, 36, 39, 41, 42, 45, 47, 49, 50, 54, 55, 56, 259.
—— griseiceps, 37, 39, 41, 56, 259.
—— infuscatum, 36, 37, 46, 52, 54.
—— jardinii, 36, 37, 42, 45, 50, 52, 256.
—— lansbergeni, 50.
—— lansbergi, 36, 37, 42, 57.
—— leucopse, 259.
—— malabaricum, 259.
—— nanum, 36, 37, 41, 45, 57, 259.
—— occipitale, 259.
—— pardalotum, 259.
—— passerinum, 36. 37, 38, 42, 259, 297, 328.
—— phalænoides, 37, 51, 55, 58, 259.
—— pumilum, 36, 37, 39, 40, 41, 56, 259.
—— radiatum, 259.
—— ridgwayi, 37, 55, 58, 259, 260.
—— siju, 36, 37, 59, 259.
—— sylvaticum, 259.
—— tephronotum, 259, 269.
—— whitelyi, 259.
Glaucion clangula, 428.
Gliriphila modesta, 147.
Graculus carbo, 431.
—— cristatus, 431.
—— javanicus, 409.
—— pygmæus, 431.
—— sinensis, 409.
Grallaria ruficapilla, 331.
Graucalus layardi, 287.
—— macæi, 287.
Grus communis, 424.
Gymnocitta cyanocephala, 270.
Gymnogenys malzacii, 221.
Gypaetus barbatus, 99, 291.
—— fulvus, 87, 89, 98, 291.
Gyps fulvescens, 89, 90.
—— hispaniolensis, 87, 88, 97.
—— indicus, 351.
—— nivicola, 97.
—— rueppelli, 90.

Hæmatopus ater, 372, 377.
—— longirostris, 131.
—— osculans, 129, 453.
—— ostralegus, 130, 131, 420.
Halcyon albiventris, 68.
—— pealii, 437.
—— recurvirostris, 437.
—— smyrnensis, 275.
Haliaetus albicilla, 99, 175, 294.
—— leucoryphus, 99.
Haliastur indus, 279.
Hapaloderma narina, 68.
Harpactes fasciatus, 281.
—— orescius, 463.
Harpagus diodon, 499.
Hedymeles ludovicianus, 331.
Heleodytes bicolor, 330.
—— griseus, 330.
Hemipodius maculatus, 127, 128.
—— vicarius, 128.
Hemiprocne albicincta, 330.
—— zonaris, 330.
Hemipus picatus, 287.
Henicurus leschenaulti, 463.
Herodias alba, 403, 404.
—— egretta, 403.
—— egrettoides, 403.
—— garzetta, 86.
Hesperophona icteroides, 265.
Hierax sinensis, 254.
Himantopus autumnalis, 403, 420.
—— brasiliensis, 498.
—— intermedius, 351.
—— nigricollis, 498.
Hirundo cucullata, 67.
—— daurica, 351.
—— domicola, 313.
—— hyperythra, 280.
—— riparia, 301.
—— rufula, 16, 20, 184.
—— rustica, 20, 67, 272, 275, 301.
—— savignyi, 519.
Horornis squameiceps, 146.
Hydrochelidon hybrida, 407, 408.
—— fissipes, 26, 497.
—— lariformis, 497.
Hydrocissa coronata, 274, 282.
Hylocharis flavifrons, 161, 162.
—— sapphirina, 166.
—— similis, 161.
Hyloterpe grisola, 463.
Hyphantornis bicolor, 78.
—— spilonota, 79.
Hypocolius ampelinus, 388.
Hypolais caligata, 513.
—— icterina, 179, 309.
—— rama, 513.
Hypopicus poliopsis, 124.
Hypsipetes neilgherriensis, 321.

Ibis falcinellus, 426.
—— nipon, 455.
Ibycter ater, 95.
—— chimachima, 95.
—— fasciatus, 95.
Iora zeylonica, 275.
Irrisor erythrorhynchus, 69.
Ispidina natalensis, 69.
Ixos luteolus, 275.

Jyngipicus auranteiventris, 264.
—— fusco-albidus, 264.
Jynx torquilla, 298.

Kenopia striata, 265.
Ketupa ceylonensis, 279.
Kittacincla macrura, 274, 396.

Lagonosticta rubricata, 80.
Lagopus mutus, 416.
Lalage terat, 440.
Lampornis calosoma, 266.
—— isauræ, 266.
—— mango, 266.
—— porphyrurus, 266.
—— urochrysea, 266.
Lamprocolius erythrogaster, 78.
—— phœnicopterus, 78.
Lamprolia victoriæ, 435.
Laniarius gutturalis, 60, 61, 62, 64, 77.
—— icterus, 76.
—— olivaceus, 77.
—— quadricolor, 77.
—— similis, 77.
Lanius auriculatus, 176, 382
—— badius, 381.
—— bucephalus, 115, 450.
—— collaris, 60, 76.
—— collurio, 76, 176, 302.
—— cristatus, 275.
—— excubitor, 176, 302.
—— incertus, 115.
—— lucionensis, 116.
—— magnirostris, 114, 116.
—— minor, 176, 302.
—— phœnicurus, 176.
—— rufus, 24, 302.
—— superciliosus, 450.
Larus argentatus, 432.
—— audouini, 6, 31, 34.
—— canus, 3, 7, 10, 12, 139, 439.
—— crassirostris, 138, 139.
—— eburneus, 140.
—— fuscus, 433.
—— glaucus, 187.
—— leucophæus, 3, 7, 10, 12, 25, 29, 31, 34, 142, 187.
—— marinus, 433.
—— melanocephalus, 3, 7, 10, 12, 15.
—— minutus, 14, 189, 432.
—— niveus, 138.
—— occidentalis, 140.
—— ridibundus, 3, 7, 10, 12, 432.
—— rossi, 187.
—— sabinii, 187.
—— tridactylus, 432.
—— vetula, 86.
Leioptila annectans, 352.
—— saturata, 352.
Lepidœnas speciosa, 331.
Leptocoma zeylonica, 275.
Leptoptilus javanicus, 403.
Leptornis samoensis, 438.
Lestris longicaudus, 187.
Leucocerca aureola, 290.
—— pectoralis, 317.
Leucospizias cinereus, 365.
—— leucosomus, 365.
—— novæ hollandiæ, 365.
Leucosticte atrata, 501.
—— australis, 501.
—— brandti, 242.
—— brunneinucha, 450, 501.
—— griseinucha, 501.
—— littoralis, 501.
—— tephrocotis, 501.
Limnaetus cristatellus, 277.
Limonidromus indicus, 146.
Limosa ægocephala, 422.
—— brevipes, 453.
—— lapponica, 422.
—— uropygialis, 453.
Linaria borealis, 242.
—— cannabina, 242.
—— flavirostris, 242.
Lobiophasis bulweri, 264.
Lobiospiza notabilis, 441.
Lobipes hyperboreus, 455.
Locustella lanceolata, 449.
Lophoaetus occipitalis, 65.
Lophornis adorabilis, 510.
Lophospizias griseiceps, 355.
—— indicus, 355.
—— trivirgatus, 355, 356.
Lorius solitarius, 436.
Loxia albiventris, 450.
—— curvirostra, 183, 414.
—— leucoptera, 183.
Luscinia aedon, 340, 341.
—— golzii, 338.
—— hafizi, 339, 340, 341.
—— hybrida, 340.
—— infuscata, 340, 341.
—— luscinia, 339.
Luscinia occidentalis, 339, 340.
—— philomela, 340.
Lusciola aedon, 338, 341.
—— caligata, 179.
—— hafizi, 341.
—— infuscata, 341.
—— lusciniæ, 338, 341.
—— orientalis, 342.
—— rubecula, 342.
—— suecica, 341, 342.

Machærhamphus alcinus, 254.
—— anderssoni, 254.
Machetes pugnax, 185, 332, 422.
Macronyx capensis, 73.
—— croceus, 73.
Macropygia assimilis, 349, 352.
—— leptogrammica, 459, 463.
—— ruficeps, 352.
—— tusalia, 459.
Macrorhamphus semipalmatus, 454.
Malacocercus striatus, 275.
Mareca penelope, 5, 457.
Megalæma caniceps, 314.
—— hodgsoni, 350.
—— ramsayi, 349.
—— viridis, 315.
—— zeylonica, 275.
Megalophonus apiatus, 61, 81.
—— crassirostris, 81.
Megalurus palustris, 463.
Megapodius pritchardi, 447.
—— stairii, 447.
Melænornis ater, 76.
Melanocorypha calandra, 311.
—— sibirica, 311.
Melierax canorus, 235.
—— gabar, 235.
—— polyzonus, 235.
Melitograis striata, 147.
Melophus melanicterus, 351.
Mergus albellus, 429, 456.
—— australis, 392.
—— castor, 456.
—— merganser, 5, 429.
—— serrator, 392, 430, 456.

Merops apiaster, 69, 300.
—— persicus, 6.
—— philippinus, 281.
—— quinticolor, 273.
—— viridis, 274, 281, 314.
Merula simillima, 319.
—— vanicorensis, 439,
Micrastur castanilius, 363.
—— gilvicollis, 232, 233.
—— leucauchen, 232.
—— mirandolii, 357.
—— poliogaster, 357.
—— ruficollis, 232.
—— zonothorax, 232.
Microhierax melanoleucus, 254.
—— sinensis, 254.
Micronisus badius, 276.
Micropternis gularis, 283.
Milvus affinis, 279.
—— ater, 104.
—— govinda, 104, 279, 351.
—— ictinus, 175, 295.
—— korschun, 503.
—— melanotis, 104.
—— migrans, 104, 175, 295.
Mimeta striata, 147.
Mimus polyglottus, 272.
Mirafra affinis, 274, 399.
Monticola cyanus, 177, 335.
—— saxatilis, 177, 305, 335.
Montifringilla fringilloides, 242.
—— nivalis, 242.
Mormon fratercula, 267.
—— grabæ, 267, 268.
Motacilla alba, 10, 180, 309.
—— capensis, 60, 73.
—— citreola, 181, 310.
—— flava, 310.
—— lugubris, 180.
—— luscinia, 339.
—— melanocephala, 181.
—— sulphurea, 309.
—— vidua, 73, 180.
Munia malabarica, 275, 399.
—— malacca, 274, 398.
—— striata, 275.
—— undulata, 275.
Muscicapa atricapilla, 301.
—— collaris, 176, 301.
—— griseola, 302.
Muscicapa parva, 173, 177, 301.
Myiagra albiventris, 440.
—— azurea, 275.
—— azureocapilla, 434.
—— castaneiventris, 447.
Myiophonus horsfieldi, 319.
—— temmincki, 335.
Myiothera melanothorax, 264.
Myzomela cruentata, 147.
—— erythrocephala, 147.
—— jugularis, 447.
—— nigriventris, 438.
—— rubrobrunnea, 147.

Nauclerus furcatus, 330.
Nectarinia afra, 60, 69.
—— chalybea, 60, 70.
—— collaris, 70.
—— famosa, 60, 63, 69.
—— gutturalis, 70.
—— olivacea, 70.
—— simplex, 264.
—— verreauxi, 70.
Nectarophila zeylonica, 315.
Neodrepanis coruscans, 380.
Neophron monachus, 91.
—— percnopterus, 99, 291.
Neornis assimilis, 459.
Nestor meridionalis, 261.
Nettopus coromandelianus, 430.
Ninox affinis, 258.
—— aruensis, 258.
—— boobook, 258.
—— connivens, 258.
—— dimorpha, 258.
—— forsteri, 258.
—— franseni, 258.
—— fusca, 256, 257, 258.
—— guteruhi, 257.
—— hantu, 259.
—— hirsuta, 258, 279.
—— hoedti, 258.
—— humeralis, 257, 258.
—— hypogramma, 259.
—— japonica, 258.
—— lugubris, 258.
—— maculata, 258.
—— novæ zealandiæ, 258.
—— obscura, 258.
Ninox ocellata, 258.
—— ochracea, 258.
—— punctulata, 259.
—— rufistrigata, 258.
—— squamipila, 257, 259.
—— strenua, 257, 258.
—— superciliaris, 259.
—— tæniata, 257, 259.
—— theomacha, 258.
—— variegata, 257, 259.
Niobe ardens, 79.
Nisoides moreli, 366.
Nisus cooperi, 500.
Noctua meridionalis, 110.
—— orientalis, 110.
Nothocercus julius, 331.
Nucifraga caryocatactes, 19, 238, 416.
Numenius arquata, 402, 424.
—— minutus, 132.
—— phæopus, 132, 402, 424.
—— tenuirostris, 424.
Nyctala tengmalmi, 176.
Nyctea scandiaca, 110, 297, 328, 517.
Nycticorax griseus, 403, 404, 425.

Ochromela nigrorufa, 318.
Ocydromus australis, 393.
—— earli, 393.
—— fuscus, 393.
Odontophorus strophium, 331.
Œdemia americana, 457.
—— fusca, 429, 457.
—— nigra, 457.
—— velvetina, 457.
Œdicnemus crepitans, 141, 323, 419.
—— magnirostris, 264.
Œna capensis, 62, 83.
Œstrelata defilippiana, 375, 376, 377.
—— diabolica, 374,375.
—— externa, 373, 375, 376, 377.
—— maculata, 375, 376.
—— sericea, 373, 375, 377.
Onychoprion anæsthetus, 407, 408.
—— fuliginosa, 412.
Ophryzone kaupi, 378.
Oræqithus ignifrons, 243.
—— pusillus, 243.

Orchilus atricapillus, 385.
—— ecaudatus, 386.
Oreocincla mollissima, 352.
—— nilgiriensis, 320.
Oreonympha nobilis, 266.
Oriolus ceylonensis, 275.
—— galbula, 414.
—— indicus, 351.
—— larvatus, 75.
Ornismya aureiventris, 165.
—— caniveti, 168.
—— esmeralda, 170.
—— phœbe, 164.
—— poortmanni, 170.
—— prasina, 163, 164.
Orœcetes gularis, 146.
Orthorhamphus magnirostris, 264.
Orthotomus borneoensis, 264.
—— coronatus, 459.
—— longicauda, 275.
Ortygion coturnix, 418.
Ortygometra quadristrigata, 446.
—— tabuensis, 447.
Osmotreron bicincta, 399.
—— pompadoura, 399.
Otis tarda, 129, 418.
—— tetrax, 418.
Otocompsa jocosa, 321.
Otocorys alpestris, 182, 311.
Otogyps calvus, 99.
Otus brachyotus, 448.
Oxyurus masafueræ, 370, 376.

Pachycephala albifrons, 447.
—— flavifrons, 447.
—— icteroides, 440, 447.
Palæornis calthropæ, 273, 411.
—— cyanocephalus, 123.
—— eupatrius, 282.
—— exsul, 342, 343.
—— melanorhynchus, 270.
—— rosæ, 282.
—— torquatus, 282.
Palumbus elphinstoni, 323.
Pandion haliaetus, 102, 293.
—— fluviatilis, 102.
Panurus biarmicus, 302.
Panychlora aliciæ, 150, 171, 172.
—— aurata, 171.
—— poortmanni, 150, 170, 172.
—— stenura, 150, 171.
Paradoxornis gularis, 352.
—— ruficeps, 352.
Pareudiastes pacificus, 446.
Parisomus assimilis, 460.
—— dalhousiæ, 460.
Parra africana, 86.
Parus ater, 303.
—— cæruleus, 303.
—— cinereus, 322.
—— commixtus, 463.
—— cristatus, 304.
—— lugubris, 304.
—— major, 180, 303.
—— niger, 73.
—— palustris, 304.
Passer ammodendri, 239.
—— arcuatus, 62, 80.
—— diffusus, 62, 80.
—— domesticus, 3, 239, 243, 312.
—— indicus, 275.
—— italiæ, 10.
—— jagoensis, 255.
—— montanus, 120, 239, 312.
—— petronia, 240, 241.
—— pulverulentus, 240.
—— salicarius, 239, 243.
—— salicicola, 17, 21, 141, 239.
—— stoliczkæ, 240.
Pastor roseus, 184, 238, 414.
Pavo cristatus, 400.
—— muticus, 463.
Pelargopsis gurial, 275.
Pelecanus crispus, 430.
—— onocrotalus, 430.
—— philippensis, 409.
Perdix cinerea, 8, 9, 13, 417.
—— saxatilis, 417.
Pericrocotus ardens, 264.
—— cinereus, 116.
—— flammeus, 288.
—— peregrinus, 288.
Peristera afra, 84.
—— chalcospila, 84.
—— lansbergi, 50.
—— larvata, 84.
—— tympanistria, 84.
Pernis apivorus, 102, 175, 293.
Petrocossyphus cyanus, 335.
Petrœca pusilla, 439.
Phaeton demersus, 113.
Phalacrocorax bicristatus, 138.
—— carbo, 25, 137.
—— pelagicus, 131, 138.
Phalaropus fulicarius, 185, 420.
—— hyperboreus, 185.
Phasianus chrysomelas, 493, 494.
—— colchicus, 418, 494.
—— decollatus, 492.
—— elegans, 492.
—— mongolicus, 492, 493.
—— persicus, 494.
—— semitorquatus, 491, 493.
—— torquatus, 125, 492.
—— versicolor, 452.
Philomela luscinia, 25.
Phlegœnas stairii, 445.
Phœnicophaes pyrrhocephalus, 273, 285.
Phœnicopterus roseus, 407.
Pholidauges verreauxi, 78.
Phyllastrephus capensis, 74.
Phyllopneuste schwartzi, 144.
—— sibilatrix, 24.
—— viridanus, 144.
Phyllornis jerdoni, 275.
—— malabaricus, 273.
Phylloscopus bonellii, 308.
—— borealis, 179.
—— collybita, 309.
—— fuscatus, 144.
—— nattereri, 179.
—— nitidus, 275.
—— sibilatrix, 308.
—— superciliosus, 180.
—— trochilus, 308.
Pica bactriana, 238.
—— caudata, 238.
—— leucoptera, 238.
—— mauritanica, 141.
—— media, 118.
—— rustica, 238, 416.
Picoides tridactylus, 299.
Picus himalayanus, 489.
—— kisuki, 451.
—— leptorhynchus, 487, 488, 490.

Picus leuconotus, 299.
—— leucoptera, 488.
—— leucurus, 451.
—— major, 145, 184, 299, 451, 488.
—— majoroides, 489.
—— malaccensis, 264.
—— mandarinus, 123, 489.
—— mahrattensis, 274, 283.
—— medius, 299.
—— mentalis, 264.
—— minor, 145, 299.
—— numidicus, 489.
—— puniceus, 264.
—— stricklandi, 274.
—— syriacus, 489.
—— variegatus, 264.
—— viridis, 184.
Pinguinaria cristata, 113.
Pionias pucherani, 147.
Pitta bertæ, 264.
—— brachycerca, 290.
Pityriasis gymnocephala, 264.
Platalea leucorodia, 404, 426.
Plectrophanes nivalis, 250, 312, 451.
Ploceus baya, 399.
Plotus melanogaster, 409.
Pnoepyga caudata, 252.
—— chocolatina, 252.
—— longicaudata, 253.
—— roberti, 252.
Podiceps auritus, 434.
—— cornutus, 456.
—— cristatus, 433.
—— minor, 434.
—— nigricollis, 434, 456.
—— philippensis, 407, 456.
—— rubricollis, 434.
Podoces panderi, 238.
Pogonorhynchus torquatus, 82.
Polioaetus ichthyaetus, 278.
Polyboroides typicus, 65, 221.
Polyborus cheriway, 95.
Polyphasia passerina, 284.
Pomatorhinus horsfieldi, 320.
—— melanurus, 395.
Porphyrio indicus, 446.
—— melanonotus, 510.
—— poliocephalus, 403.
—— stanleyi, 510.
Porphyrio veterum, 15, 17.
—— vitiensis, 446.
Porzana erythrothorax, 134, 136, 455.
—— exquisita, 135, 455.
—— pygmæa, 134.
Prasitis phæopyga, 153.
—— prasina, 163.
Pratincola atra, 321.
—— hemprichi, 338.
—— indica, 337.
—— rubetra, 306, 337.
—— rubicola, 306, 337, 338.
—— torquata, 72.
Prinia hodgsoni, 397.
—— socialis, 321, 397, 398.
—— superciliaris, 264.
Prionochilus vincens, 273, 398.
Procellaria diabolica, 375.
—— leucorrhoa, 188.
—— maculata, 375.
Promerops caffer, 60, 63, 70.
Psalidoprocne holomelæna, 67.
Psittacus chalcopterus, 331.
——melanocephalus, 331.
—— rodericanus, 343.
Ptilonopus apicalis, 442, 447.
—— fasciatus, 438, 442, 445.
—— perousii, 441, 442, 445.
Ptilonorhynchus holosericeus, 378.
Ptilotis carunculata, 437, 438.
—— megarhyncha, 147.
—— pyrrhosus, 147.
—— rostrata, 147.
Ptynx fulvescens, 256.
Puffinus cinereus, 27, 142.
—— creatopus, 376, 377.
—— kuhli, 11.
—— major, 187.
—— sericeus, 373, 374, 375.
—— yekouan, 11.
Pycnonotus atricapillus, 463.
—— capensis, 62, 74.
—— hæmorrhous, 275.
—— nigricans, 74.
Pycnorhamphus icteroides, 265.
Pyctorhis sinensis, 290.
Pygoscelis tæniata, 113.
—— wagleri, 113.
Pyrenestes albifrons, 79.
Pyrgita petronia, 22.
Pyrophthalma melanocephala, 28.
Pyrrhocorax alpinus, 237, 414.
—— graculus, 237, 415.
Pyrrhula cineracea, 245.
—— enucleator, 414.
—— europæa, 244.
—— ignifrons, 243.
—— nipalensis, 244.
—— pusilla, 243.
—— rubricilla, 414.
—— vulgaris, 183, 244.
Pyrrhulauda grisea, 274, 399.
Pyrrhulopsis splendens, 436.

Querquedula creccoides, 329.
—— eatoni, 328, 329.
—— gibberifrons, 329.

Rallina mandarina, 136.
Rallus aquaticus, 16, 186, 418.
—— brachypus, 393.
—— pectoralis, 446.
—— semiplumbeus, 332.
Rectes nigrescens, 148.
Recurvirostra avocetta, 420.
Regulus cristatus, 180, 302.
—— ignicapillus, 302.
—— modestus, 173.
Rhinogryphus aura, 94.
—— burrovianus, 94.
—— pernigra, 93.
—— urubitinga, 93, 94.
Rhipidura albiscapa, 378.
—— dryas, 147.
—— kordensis, 147.
—— motacilloides, 378.
—— nebulosa, 439.
—— rufidorsa, 147.
—— rufifrons, 377, 378.
Rhodostethia rosea, 484, 485.
Rhynchæa bengalensis, 402.
Rissa tridactyla, 10.
Rubigula melanictera, 396.
Ruticilla aurorea, 449.

Ruticilla phœnicurus, 24, 178, 306.
—— suecica, 177.
—— titys, 178, 306.

Salicaria hypolais, 179.
—— sibilatrix, 179.
Saraglossa spiloptila, 459.
Sarciophorus bilobus, 323, 401.
Sarcorhamphus æquatorialis, 93.
—— gryphus, 92.
—— magellanicus, 91.
Sarkidiornis melanonotus, 407.
Saxicola albicollis, 179.
—— deserti, 337.
—— erythræa, 140.
—— familiaris, 60, 61, 72.
—— halophila, 140.
—— homochroa, 140.
—— isabellina, 335.
—— leucomela, 179, 336.
—— leucopygia, 22, 337.
—— leucura, 179.
—— lugens, 336.
—— melanogenys, 336.
—— melanotus, 336.
—— melanoleuca, 336, 337.
—— monacha, 336.
—— morio, 336.
—— œnanthe, 24, 178, 306, 335.
—— pileata, 61, 72.
—— rubetra, 178.
—— rubicola, 178.
—— salina, 337.
—— saltator, 335.
—— sinuata, 61, 72.
—— squalida, 335.
—— stapazina, 179.
—— syenitica, 337.
—— talas, 336.
—— vittata, 336.
—— xanthomelæna, 337.
Sceloglaux albifacies, 509.
Scelospizias badius, 357, 360, 361, 366.
—— brevipes, 360, 361.
—— brutus, 358, 359.
—— franciscæ, 357, 358, 484.
—— poliopsis, 360, 361.
—— polizonoides, 360, 366, 367.
—— pusillus, 358, 359.
—— sphenurus, 360.
—— tachiro, 358, 361, 362, 364.
Scelospizias tousseneli, 364.
—— unduliventer, 362, 363, 364.
Schœnicola pallasi, 451.
—— pyrrhuloides, 451.
—— yessoensis, 451.
Scolopax brehmi, 423.
—— gallinago, 423.
—— gallinula, 423.
—— major, 423.
—— rusticola, 5, 131, 185, 423.
Scops asio, 326, 327.
—— giu, 111, 176, 298, 326, 327.
—— japonicus, 448.
—— semitorquatus, 448.
—— spilonotus, 448.
—— trichopsis, 495.
Scopus umbretta, 63, 86.
Scotopelia bowieri, 261.
—— peli, 261.
—— ussheri, 261.
Serilophus lunatus, 352.
Serinus ignifrons, 243.
—— pusillus, 243.
Serpophaga leucura, 384.
—— pœcilocerca, 385.
Serrirostrum carbonarium, 213.
—— sittoides, 208.
Setaria pectoralis, 264.
Sibia picaoides, 459.
Sitta cæsia, 304.
Smaragditis euchloris, 171.
Somateria mollissima, 186.
—— stelleri, 186.
Spatula clypeata, 427, 457.
Spheniscus humboldti, 377.
Sphenocichla roberti, 251.
Sphenœacus africanus, 62, 71.
Spilornis bacha, 277.
—— cheela, 277.
—— spilogaster, 277.
Squatarola helvetica, 419, 452.
Stelgidopteryx ruficollis, 330.
Stercorarius catarrhactes. 433.
—— parasiticus, 433.
—— pomatorhinus, 433.
Sterna anglica, 187, 431.
—— cantiaca, 14, 26, 87.
Sterna caspia, 187.
—— dougalli, 187.
—— fissipes, 432.
—— fluviatilis, 26, 431.
—— hybrida, 432.
—— leucoptera, 432.
—— media, 408.
—— melanogaster, 407, 408.
—— minuta, 26, 412, 431.
—— pelecanoides, 407, 408.
Sternula sinensis, 407.
Stictœnas phæonotus, 62, 83.
Strepsilas interpres, 401, 420, 446.
Strigiceps cineraceus, 110.
—— cyaneus, 105, 109.
—— pallidus, 109.
Strix aluco, 66, 297, 324, 325, 326, 327.
—— asio, 324.
—— bubo, 324, 327.
—— candida, 512.
—— delicatula, 436, 512.
—— flammea, 66, 111, 324, 325, 326, 327.
—— funerea, 324.
—— fusca, 257.
—— maugæi, 257.
—— nyctea, 324, 325, 326, 327, 328.
—— otus, 324, 326.
—— passerina, 324, 325, 326, 327.
—— scandiaca, 324, 328.
—— scops, 324, 326, 327.
—— stridula, 324, 325, 326, 327.
—— ulula, 324.
—— walleri, 513.
Sturnia albofrenata, 398.
—— daurica, 119.
—— funerea, 110.
—— sinensis, 119.
Sturnoides atrifusca, 438, 440.
Sturnus cinerascens, 119.
—— nitens, 238.
—— purpurascens, 238, 404.
—— unicolor, 238.
—— vulgaris, 19, 238.
Sula bassana, 187, 431.
—— capensis, 87.
Surnia funerea, 297, 325, 326, 327.
—— nisoria, 110.

Surnia nivea, 110.
—— ulula, 325, 326, 327.
Suthora munipurensis, 250.
Sylochelidon caspia, 407.
Sylvia atricapilla, 17, 307.
—— cinerea, 25.
—— conspicillata, 141.
—— curruca, 307.
—— hortensis, 24, 141.
—— japonica, 179.
—— melanocephala, 17, 25, 179.
—— mesoleuca, 178.
—— nisoria, 307.
—— rama, 513.
—— rufa, 308.
—— salicaria, 307.
—— sarda, 24, 28.
—— subalpina, 25.
Sylvietta micrura, 71.
Sypheotides auritus, 323.
Syrnium aluco, 111, 326, 327.
—— davidi, 256.
—— fulvescens, 256.
—— fuscescens, 256.
—— indranee, 273.
—— nebulosum, 256.
—— nivicolum, 256.
—— rufescens, 256.
—— uralense, 256.
Syrrhaptes paradoxus, 184.

Taccocua leschenaulti, 285.
Tachyspizias cuculoides, 365.
—— soloensis, 365.
Tadorna cornuta, 427.
—— rutila, 426.
Tantalus leucocephalus, 404, 405.
Tatare longirostris, 447.
Tchitrea paradisea, 289.
—— viridis, 75.
Temenuchus pagodarum, 274, 398.
Tephrodornis pondiceriana, 287.
Tetrao medius, 417.
—— tetrix, 417.
—— urogallus, 417.
Thalassidroma pelagica, 433.
Thalassœca glacialoides, 376, 377.
Thalurania lerchi, 266.
—— wagleri, 166.
Thamnobia coryphæa, 61, 72.
—— fulicata, 274, 275. 396.
Thaumalia picta, 125.
Threskiornis melanocephalus, 404.
Tichodroma muraria, 3, 304.
Timelia bengalensis, 463.
—— erythroptera, 264.
Tinnunculus alaudarius, 108.
—— cenchris, 108.
—— rupicolus, 66.
—— sparverius, 330, 377.
Toccus flavirostris, 82.
—— gingalensis, 273, 282.
Todirostrum ecaudatum, 385.
Totanus calidris, 492, 421.
—— canescens, 86, 420.
—— fuscus, 421, 453.
—— glareola, 21, 86, 185, 276, 421, 453.
—— glottis, 185, 402, 453.
—— hypoleucus, 422.
—— ochropus, 185, 421, 453.
—— stagnatilis, 185, 402, 420.
Treron delalandii, 83.
Trichoglossus cyanogrammus, 147.
Tricholestes criniger, 264.
—— minutus, 264.
Tringa acuminata, 455.
—— albescens, 455.
—— alpina, 422.
—— canutus, 422.
—— cinclus, 455.
—— damacensis, 455.
—— maculata, 455.
—— minuta, 60, 86, 185, 402, 412, 422.
—— salina, 412.
—— subarquata, 402, 422.
—— subminuta, 402.
—— temmincki, 185, 412, 422.
Trochalopteron cachinnans, 320.
Trochilus angustipennis, 153, 154.
—— auriceps, 168.
Trochilus bicolor, 166.
—— chrysogaster, 153, 154.
—— daphne, 163, 164.
—— flavifrons, 165.
—— lamprus, 161.
—— nitidissimus, 161.
—— phæopygus, 153, 158.
—— phaeton, 165, 166.
—— phœbe, 165.
—— similis, 161, 162.
—— splendidus, 165, 166.
Troglodytes alascensis, 143, 144.
—— fumigatus, 143, 144.
—— parvulus, 180, 304.
Tropidorhynchus gilolensis, 147.
—— inornatus, 147.
Turdinus brevicaudatus, 252.
Turdus atrigularis, 332, 333, 334.
—— chrysopleurus, 519.
—— concolor, 345, 346.
—— falklandicus, 376.
—— fumidus, 344, 345, 346, 347.
—— fuscatus, 6.
—— hypopyrrhus, 344, 345, 346.
—— icterorhynchus, 520.
—— iliacus, 177, 305, 335.
—— javanicus, 344, 345, 346.
—— litsitsirupa, 73.
—— merula, 304, 332.
—— musicus, 305.
—— mystacinus, 332, 333, 334.
—— naumanni, 334.
—— nigricrissus, 345, 346.
—— obscurus, 520.
—— pallens, 334.
—— pelios, 146, 519.
—— pilaris, 305, 334.
—— ruficollis, 177, 334.
—— schlegeli, 344, 345, 347.
—— swainsoni, 173, 177.
—— torquatus, 5, 304.
—— varius, 177.
—— viscivorus, 304, 334.
—— whitii, 173.

Turnix hottentota, 85.
—— sylvatica, 21, 24.
—— taigori, 400.
Turtur albiventris, 60, 83.
—— auritus, 84, 184.
—— gelastes, 125.
—— humilis, 125.
—— suratensis, 275.

Ulula urulensis, 297.
Uncirostrum brelayi, 207.
—— cyaneum, 218.
—— d'orbignii, 209.
—— lafresnayi, 214.
—— sittaceum, 207.
Upupa epops, 20, 184, 300.
—— minor, 69.
—— nigripennis, 274, 286, 316.
Uragus sibiricus, 245.
Uria carbo, 458, 520.
—— grylle, 520.
Urobrachya axillaris, 79.
Urocissa magnirostris, 350.
Urospizias albigularis, 365,
—— cruentatus, 365.
—— griseigularis, 365.
—— haplochrous, 365.
—— henicogrammus, 365.
—— hiogaster, 365.
—— muelleri, 365.
—— poliocephalus, 365.
—— rufitorques, 365.
—— sylvestris, 365.
—— torquatus, 365.
—— wallacii, 365.

Vanellus vulgaris, 419.
Vidua principalis, 62, 79
Vinago sieboldi, 452.
Vultur cinereus, 98.
Vultur gryphus, 91.
—— monachus, 98, 291.

Xantholæma indica, 274, 284, 288.
—— rubricapilla, 284.
Xanthotis chrysotis, 147.
Xema furcata, 495.
—— sabinii, 272.

Yunx japonica, 124.

Zanclostomus viridirostris, 284.
Zosterops capensis, 60, 70.
—— ceylonensis, 410.
—— palpebrosus, 275, 322.

END OF VOL. V.

PRINTED BY TAYLOR AND FRANCIS,
RED LION COURT, FLEET STREET.

THIRD SERIES.
VOL. V. No. 17.

JANUARY 1875.

Price 6s.

THE IBIS,

A

QUARTERLY JOURNAL OF ORNITHOLOGY.

EDITED BY

OSBERT SALVIN, M.A., F.R.S.,

STRICKLAND CURATOR IN THE UNIVERSITY OF CAMBRIDGE, &c.

LONDON:
JOHN VAN VOORST, 1, PATERNOSTER ROW.

Annual Subscription, payable before 31st March each year, £1 1s.

TAYLOR AND FRANCIS, PRINTERS,] [RED LION COURT, FLEET STREET.

Now ready, price £1.

CATALOGO SISTEMATICO DEGLI UCCELLI DI BORNEO

DI

TOMMASO SALVADORI,

con note ed osservazioni dei Signori GIACOMO DORIA ed ODOARDO BECCARI intorno alle specie da essi raccolte nel territorio di Sarawak durante gli anni 1865, 1866, 1867.

THIS work forms a volume in 8vo of 480 pages, illustrated with five coloured plates. It contains the account of 392 species known to inhabit the Island of Borneo, besides 50 other species, which, although not yet found in Borneo, most probably exist there. Full references are given to every species, and critical remarks. All the new and little-known species are described; several of these are illustrated with coloured plates. The Introduction contains an historical account of the Ornithology of Borneo, its Bibliography, and a discussion of its ornithological relations.

This work forms the fifth volume of the 'Annali del Museo Civico di Genova.' A very limited number of copies have been printed for circulation, and can be had by applying to the Author at the Zoological Museum, Turin, or to

H. LOESCHER, BOOKSELLER, TURIN.

Just published, post 8vo, price 6*s.*

THE BIRDS OF THE HUMBER DISTRICT.

BY

JOHN CORDEAUX,

OF GREAT COTES.

"We must now take leave of this, the latest contribution to the avifauna of the British Islands, which, as a careful and painstaking record of the arrival of our migratory birds on the shores and flats of the wild and interesting region to which the author's remarks have been limited, may be regarded as almost exhaustive; and we heartily recommend, as a model for future monographers with similar tastes and equal opportunities, this charming little volume on the 'birds of the Humber District.'"—*Annals & Mag. of Nat. Hist.* May 1873.

JOHN VAN VOORST, 1 PATERNOSTER ROW.

Part VIII., price 2*s.* 6*d.*

PROFESSOR NEWTON'S REVISED EDITION OF

YARRELL'S HISTORY OF BRITISH BIRDS.

JOHN VAN VOORST, 1 PATERNOSTER ROW.

In the press, 8vo, price 14*s.*

ORNITHOLOGY OF THE STRAITS OF GIBRALTAR,

INCLUDING

THE NORTHERN PART OF MOROCCO AND THE WESTERN PART OF ANDALUCIA.

WITH TWO MAPS.

BY LIEUT.-COL. HOWARD L. IRBY.

Published by the Author at the Office of the British Ornithologists' Union, 6 Tenterden Street, Hanover Square, W., to which address intending Subscribers are requested to send their names.

Now ready, price 10*s.*

NOMENCLATOR AVIUM NEOTROPICALIUM:

Sive avium, quæ in Regione Neotropica hucusque repertæ sunt, nomina systematicè disposita, adjecta cujusque speciei patria. Accedunt generum et specierum novarum diagnoses.

AUCTORIBUS

PHILIPPO LUTLEY SCLATER, A.M., Phil. Doct.,

ET

OSBERTO SALVIN, A.M.

This list, which gives the name and range of every species of Bird certainly known to have occurred in America south of the United States, is issued by the authors preparatory to their 'Index Avium Americanarum' now long in preparation. It is printed in foolscap folio, with wide margins, so as to leave room for MS. notes and corrections, and can be obtained from the authors at the Office of 'The Ibis,'

6 TENTERDEN STREET, HANOVER SQUARE, W.

Complete in Thirteen Parts, imp. 4to, each 21*s.*; Large Paper, royal folio, each £2 2*s.*, 1866–69.

EXOTIC ORNITHOLOGY,

BY

PHILIP LUTLEY SCLATER, M.A., Ph.D., F.R.S., &c.,

AND

OSBERT SALVIN, M.A., F.Z.S., &c.

Under this title has been completed a series of One Hundred Coloured Lithographic Illustrations of New or hitherto Unfigured Birds, to form a Supplement to Buffon's 'Planches Enluminées,' *Paris*, 1770–86; to Temminck's 'Planches Coloriées,' 5 vols., *Paris*, 1838; and to Des Murs's 'Iconographie Ornithologique,' *Paris*, 1845–49.

The first series of this work contains One Hundred Plates. Each Part contains *eight coloured plates* and *two sheets of letterpress.* The thirteenth part contains the last four plates, and the Title and Index to the volume.

Only One Hundred and Fifty copies of the work, in imperial 4to, have been printed. The price of each part is £1 1s., to be paid for on delivery.

Fifteen copies have been printed on Large Paper, royal folio, to match the Large-Paper issues of Temminck and Des Murs. The subscription price of these copies is, each part, £2 2*s.*

PUBLISHED BY B. QUARITCH, 15 PICCADILLY, LONDON, W.

CONTENTS OF NUMBER XVII.—THIRD SERIES.

		Page
I.	Cruise of the 'Zara,' R.Y.S., in the Mediterranean. By Lord Lilford	1
II.	Contributions to a History of the Accipitres. The Genus *Glaucidium*. By R. Bowdler Sharpe, F.L.S., F.Z.S., &c., of the Zoological Department, British Museum. (Plates I., II.)	35
III.	Three Months on the Coast of South Africa. By Captain G. E. Shelley, F.R.G.S.	59
IV.	Notes on a Catalogue of the Accipitres in the British Museum, by R. Bowdler Sharpe (1874). By J. H. Gurney	87
V.	Notes on Severtzoff's 'Fauna of Turkestan' (Turkestanskie Jevotnie). By H. E. Dresser	96
VI.	On Two apparently new Species of Penguin from New Zealand. By Dr. O. Finsch, Hon.M.B.O.U.	112
VII.	Ornithological Notes made at Chefoo (Province of Shantung, North China). By R. Swinhoe, H.M. Consul. (Plate III.) [Concluded.]	114
VIII.	Letters, Announcements, &c.:—	
	Letters from Mr. J. H. Gurney, jun., Mr. Andrew Anderson, Mr. Swinhoe (two), Herr A. B. Meyer, and Lord Walden	140

Covers for binding last year's Volume may be had on application to the Publisher.

Communications may be addressed to the Editor, Osbert Salvin, Esq., 6 Tenterden Street, Hanover Square, W. Advertisements &c. to the Publisher, John Van Voorst, 1 Paternoster Row, London, E.C.

Members of the B. O. U. are requested to keep the Secretary, F. Du Cane Godman, Esq., 6 Tenterden Street, Hanover Square, W., informed of any change of Residence, so that the Numbers of 'The Ibis' may be sent to them without delay.

THIRD SERIES.
Vol. V. No. 18.

APRIL 1875.

Price 6s.

THE IBIS,

A

QUARTERLY JOURNAL OF ORNITHOLOGY.

EDITED BY

OSBERT SALVIN, M.A., F.R.S.,

STRICKLAND CURATOR IN THE UNIVERSITY OF CAMBRIDGE, &c.

LONDON:
JOHN VAN VOORST, 1, PATERNOSTER ROW.

Annual Subscription, payable before 31st March each year, £1 1s.

TAYLOR AND FRANCIS, PRINTERS,] [RED LION COURT, FLEET STREET.

Now ready, price £1.

CATALOGO SISTEMATICO DEGLI UCCELLI DI BORNEO

DI

TOMMASO SALVADORI,

con note ed osservazioni dei Signori Giacomo Doria ed Odoardo Beccari intorno alle specie da essi raccolte nel territorio di Sarawak durante gli anni 1865, 1866, 1867.

This work forms a volume in 8vo of 480 pages, illustrated with five coloured plates. It contains the account of 392 species known to inhabit the Island of Borneo, besides 50 other species, which, although not yet found in Borneo, most probably exist there. Full references are given to every species, and critical remarks. All the new and little-known species are described; several of these are illustrated with coloured plates. The Introduction contains an historical account of the Ornithology of Borneo, its Bibliography, and a discussion of its ornithological relations.

This work forms the fifth volume of the 'Annali del Museo Civico di Genova.' A very limited number of copies have been printed for circulation, and can be had by applying to the Author at the Zoological Museum, Turin, or to

H. LOESCHER, BOOKSELLER, TURIN.

Just published, post 8vo, price 6*s*.

THE BIRDS OF THE HUMBER DISTRICT.

BY

JOHN CORDEAUX,

OF GREAT COTES.

"We must now take leave of this, the latest contribution to the avifauna of the British Islands, which, as a careful and painstaking record of the arrival of our migratory birds on the shores and flats of the wild and interesting region to which the author's remarks have been limited, may be regarded as almost exhaustive; and we heartily recommend, as a model for future monographers with similar tastes and equal opportunities, this charming little volume on the 'birds of the Humber District.'"—*Annals & Mag. of Nat. Hist.* May 1873.

JOHN VAN VOORST, 1 PATERNOSTER ROW.

Part VIII., price 2*s*. 6*d*.

PROFESSOR NEWTON'S REVISED EDITION OF

YARRELL'S HISTORY OF BRITISH BIRDS.

JOHN VAN VOORST, 1 PATERNOSTER ROW.

Just published, 8vo, price 14*s*.

ORNITHOLOGY OF THE STRAITS OF GIBRALTAR,

INCLUDING

THE NORTHERN PART OF MOROCCO AND THE WESTERN PART OF ANDALUCIA.

WITH TWO MAPS.

By LIEUT.-COL. L. H. IRBY.

Published by the Author at the Office of the British Ornithologists' Union, 6 Tenterden Street, Hanover Square, W., to which address intending Subscribers are requested to send their names.

Now ready, price 10*s.*

NOMENCLATOR AVIUM NEOTROPICALIUM:

Sive avium, quæ in Regione Neotropica hucusque repertæ sunt, nomina systematicè disposita, adjecta cujusque speciei patria. Accedunt generum et specierum novarum diagnoses.

AUCTORIBUS

PHILIPPO LUTLEY SCLATER, A.M., Phil. Doct.,

ET

OSBERTO SALVIN, A.M.

This list, which gives the name and range of every species of Bird certainly known to have occurred in America south of the United States, is issued by the authors preparatory to their 'Index Avium Americanarum' now long in preparation. It is printed in foolscap folio, with wide margins, so as to leave room for MS. notes and corrections, and can be obtained from the authors at the Office of 'The Ibis,'

6 TENTERDEN STREET, HANOVER SQUARE, W.

Complete in Thirteen Parts, imp. 4to, each 21*s.*; Large Paper, royal folio, each £2 2*s.*, 1866–69.

EXOTIC ORNITHOLOGY,

BY

PHILIP LUTLEY SCLATER, M.A., PH.D., F.R.S., &c.,

AND

OSBERT SALVIN, M.A., F.Z.S., &c.

UNDER this title has been completed a series of One Hundred Coloured Lithographic Illustrations of New or hitherto Unfigured Birds, to form a Supplement to BUFFON'S 'Planches Enluminées,' *Paris*, 1770–86; to TEMMINCK'S 'Planches Coloriées,' 5 vols., *Paris*, 1838; and to DES MURS'S 'Iconographie Ornithologique,' *Paris*, 1845–49.

The first series of this work contains One Hundred Plates. Each Part contains *eight coloured plates* and *two sheets of letterpress.* The thirteenth part contains the last four plates, and the Title and Index to the volume.

Only One Hundred and Fifty copies of the work, in imperial 4to, have been printed. The price of each part is £1 1*s.*, to be paid for on delivery.

Fifteen copies have been printed on Large Paper, royal folio, to match the Large-Paper issues of Temminck and Des Murs. The subscription price of these copies is, each part, £2 2*s.*

PUBLISHED BY B. QUARITCH, 15 PICCADILLY, LONDON, W.

CONTENTS OF NUMBER XVIII.—THIRD SERIES.

Page

IX. Notes on the *Trochilidæ*. The Genera *Chlorostilbon* and *Panychlora*. By D. G. Elliot, F.L.S. &c. 149

X. Notes on the Birds of Heligoland in Mr. Gätke's Collection. By John Cordeaux 172

XI. The Birds of Transylvania. By Charles G. Danford, F.Z.S., and John A. Harvie Brown 188

XII. On the Nidification of certain Indian Birds. Part IV. By Andrew Anderson, F.Z.S. 199

XIII. Synopsis of the Species of the Subfamily *Diglossinæ*. By P. L. Sclater, M.A., F.R.S. (Plates IV., V.) 204

XIV. Notes on a 'Catalogue of the Accipitres in the British Museum,' by R. Bowdler Sharpe (1874). By J. H. Gurney . . 221

XV. Notes on Severtzoff's 'Fauna of Turkestan' (Turkestanskie Jevotnie). By H. E. Dresser 236

XVI. Descriptions of some supposed new Species of Birds. By Major Godwin-Austen, F.Z.S., and Arthur, Viscount Walden, F.R.S. 250

XVII. Contributions to a History of the *Accipitres*. Notes on Birds of Prey in the Museum at the Jardin des Plantes and in the Collection of Mons. A. Bouvier. By R. Bowdler Sharpe, F.L.S., F.Z.S., &c., of the Zoological Department, British Museum 253

XVIII. Notices of recently published Ornithological Works. . . . 261

XIX. Letters, Announcements, &c.:—

Letters from Mons. Léon Olphe-Galliard, Mr. J. H. Gurney, Viscount Walden, Dr. Elliott Coues, and Professor Newton . . . 267

Covers for binding last year's Volume may be had on application to the Publisher.

Communications may be addressed to the Editor, Osbert Salvin, Esq., 6 Tenterden Street, Hanover Square, W. Advertisements &c. to the Publisher, John Van Voorst, 1 Paternoster Row, London, E.C.

Members of the B. O. U. are requested to keep the Secretary, F. Du Cane Godman, Esq., 6 Tenterden Street, Hanover Square, W., informed of any change of Residence, so that the Numbers of 'The Ibis' may be sent to them without delay.

THIRD SERIES.
Vol. V. No. 19.
JULY 1875.
Price 6s.

THE IBIS,

A

QUARTERLY JOURNAL OF ORNITHOLOGY.

EDITED BY

OSBERT SALVIN, M.A., F.R.S.,

STRICKLAND CURATOR IN THE UNIVERSITY OF CAMBRIDGE, &c.

LONDON:
JOHN VAN VOORST, 1, PATERNOSTER ROW.

Annual Subscription, payable before 31st March each year, £1 1s.

TAYLOR AND FRANCIS, PRINTERS,] [RED LION COURT, FLEET STREET.

CONTENTS OF NUMBER XIX.—THIRD SERIES.

Page

XX. On the Birds of the South-eastern Subdivision of Southern Ceylon. By W. Vincent Legge, Lieut. R.A., F.Z.S. . 273

XXI. The Birds of Transylvania.—Part II. By Charles G. Danford and John A. Harvie-Brown 291

XXII. On the Nidification of certain South-Indian Birds. By Rhodes W. Morgan 313

XXIII. Contributions to a History of the *Accipitres.* The Genus *Strix* of Linnæus and its type. By R. Bowdler Sharpe, F.L.S., F.Z.S., &c., of the Zoological Department, British Museum 324

XXIV. Description of an apparently new Species of Teal from Kerguelen's Island. By R. Bowdler Sharpe, F.L.S. &c. 328

XXV. On some Birds from Spanish Guiana collected by Herr Müntzberg. By August von Pelzeln 329

XXVI. Notes on Severtzoff's 'Fauna of Turkestan' (Turkestanskie Jevotnie). By H. E. Dresser 332

XXVII. Note on *Palæornis exsul.* By Alfred Newton, M.A., F.R.S. (Plate VII.) 342

XXVIII. On *Turdus javanicus* of Horsfield, and its allied form *Turdus schlegeli.* By P. L. Sclater, M.A., F.R.S. (Plate VIII.) 344

XXIX. Ornithological Notes from the District of Karen-nee, Burmah. By Robert Wardlaw Ramsay 348

XXX. Notes on a 'Catalogue of the Accipitres in the British Museum,' by R. Bowdler Sharpe (1874). By J. H. Gurney. (Plate VI.) 353

XXXI. Additional Notes on the Birds of the Islands of Mas-afuera and Juan Fernandez. By Osbert Salvin, M.A., F.R.S. 370

XXXII. Notes on *Rhipidura rufifrons,* with a Description of its Eggs and Nest. By Edward P. Ramsay, C.M.Z.S. &c. 377

XXXIII. A few stray Notes on African Birds. By Capt. G. E. Shelley, F.R.G.S. 379

XXXIV. Descriptions of five new Species of American Birds. By George N. Lawrence. (Plate IX.) 383

XXXV. Letters, Announcements, &c.:—

Letters from Mr. H. E. Dresser, Mr. W. T. Blanford, Mr. Sclater, and extracts from a letter from Baron A. von Hügel; News of M. d'Albertis in New Guinea; New Ornithological Works . . 387

Covers for binding last year's Volume may be had on application to the Publisher.

Communications may be addressed to the Editor, Osbert Salvin, Esq., 6 Tenterden Street, Hanover Square, W. Advertisements &c. to the Publisher, John Van Voorst, 1 Paternoster Row, London, E.C.

Members of the B. O. U. are requested to keep the Secretary, F. Du Cane Godman, Esq., 6 Tenterden Street, Hanover Square, W., informed of any change of Residence, so that the Numbers of 'The Ibis' may be sent to them without delay.

THIRD SERIES.
VOL. V. No. 20.
OCTOBER 1875.
Price 6*s*.

THE IBIS,

A

QUARTERLY JOURNAL OF ORNITHOLOGY.

EDITED BY

OSBERT SALVIN, M.A., F.R.S.,

STRICKLAND CURATOR IN THE UNIVERSITY OF CAMBRIDGE, &c.

LONDON:
JOHN VAN VOORST, 1, PATERNOSTER ROW.

Annual Subscription, payable before 31*st March each year,* £1 1s.

TAYLOR AND FRANCIS, PRINTERS,] [RED LION COURT, FLEET STREET.

CENTRAL PARK,
NEW YORK.
OF NATURAL HISTORY

CONTENTS OF NUMBER XX.—THIRD SERIES.

Page

XXXVI. On the Birds of the South-eastern Subdivision of Southern Ceylon. By W. Vincent Legge, Lieut. R.A., F.Z.S. [Conclusion.] 395

XXXVII. The Birds of Transylvania. By Charles G. Danford and John A. Harvie Brown. [Conclusion.] . . . 412

XXXVIII. Description of a new Flycatcher belonging to the Genus *Myiagra*, and Notes on some other Fijian Birds. By E. L. Layard, Administrator of the Government of the Colony of Fiji 434

XXXIX. List of Samoan Birds, with Notes on their Habits &c. By the Rev. S. J. Whitmee 436

XL. On the Contents of a second Box of Birds from Hakodadi, in Northern Japan. By R. Swinhoe 447

XLI. Notes on Birds from Burma. By Arthur, Viscount Walden, F.R.S.. 458

XLII. Remarks on the Species of the Tanagrine Genus *Chlorochrysa*. By P. L. Sclater, M.A., Ph.D., F.R.S. (Plate X.) 464

XLIII. Notes on *Chalcopelia brehmeri*. By Dr. O. Finsch . . 467

XLIV. Notes on a 'Catalogue of the Accipitres in the British Museum,' by R. Bowdler Sharpe. By J. H. Gurney . 468

XLV. On the Immature Plumage of *Rhodostethia rosea*. By Howard Saunders, F.L.S., F.Z.S. 484

XLVI. Notes on some new Central-Asiatic Birds. By Dr. N. Severtzoff 487

XLVII. Notices of recently published Ornithological Works . . 494

XLVIII. Letters, Announcements, &c.:—

Letters from Messrs. E. P. Ramsay, H. E. Dresser (two), A. B. Brooke, J. H. Gurney, J. H. Gurney, jun., J. A. Harvie Brown, and Robert Swinhoe; News of the Arctic Expedition; Mr. Dresser's reprint of Eversmann's 'Addenda;' unpublished letters of Gilbert White 512

XLIX. Obituary:—

Notice of the death of Sir William Jardine, of Carl J. Sundevall, and of Dr. John Edward Gray 522

Index 527

Covers for binding last year's Volume may be had on application to the Publisher.

Communications may be addressed to the Editor, Osbert Salvin, Esq., 6 Tenterden Street, Hanover Square, W. Advertisements &c. to the Publisher, John Van Voorst, 1 Paternoster Row, London, E.C.

Members of the B. O. U. are requested to keep the Secretary, F. Du Cane Godman, Esq., 6 Tenterden Street, Hanover Square, W., informed of any change of Residence, so that the Numbers of 'The Ibis' may be sent to them without delay.

The Ibis 1875 Vol.5

APR 69
N. MANCHESTER,
INDIANA

AMNH LIBRARY
100109440